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Original Contributions.

A RESUME OF THE IMPORTANT CHANGES THAT HAVE TAKEN PLACE IN DENTISTRY DURING THE LAST THIRTY-FIVE YEARS.

BY J. N. CROUSE, D.D.S., CHICAGO. READ BEFORE THE NATIONAL DENTAL
ASSOCIATION, AT NIAGARA FALLS, AUG. 1-4, 1899.

The first incident relative to dentistry which occurs to me is, when as a boy, I went to the office of a man who was a jeweler, a dentist and a good sportsman, with a view of selling him a dog. While there he asked me to witness the operation of filling a tooth. Having a variety of cylinders of non-cohesive gold, he applied napkins and made a large gold filling, which I had the pleasure of examining twenty years after when serving the same patient professionally, and found it in first-class condition. I give this testimony of a man who forty years ago filled teeth successfully in a country town and repaired watches between times. Such cases as this could easily be duplicated in the experience of many other practitioners, and would show that teeth were successfully filled when the aids were scarce and very crude; but I desire more especially to bring up for discussion that old method of filling teeth with non-cohesive gold—a practice almost abandoned at present.

When I first commenced the study of dentistry there were but four dental colleges, and few men considered it necessary to take a course, which was then two years of four months each, and five years' practice was equivalent to one course of four months.

At this period there were no means of keeping the cavities dry except by the use of the napkin and bibulous paper, so that filling teeth under water with gold was not an uncommon practice. The first and most important change in operative dentistry grew out of the use of rubber-dam, which was introduced to the profession late in 1865 or early in 1866, by Barnum of New York. This important invention was not patented; although an effort was made to secure a

patent it was unsuccessful, on what ground we have not ascertained, but we believe that proper effort would have secured a patent and thus have given to the inventor a compensation which he deserved, as his invention has been probably the greatest and most beneficial gift that the dental profession has ever had.

Following close upon the use of rubber-dam came the more general use of cohesive gold, as the dam made absolute dryness possible, without which cohesive gold was comparatively useless.

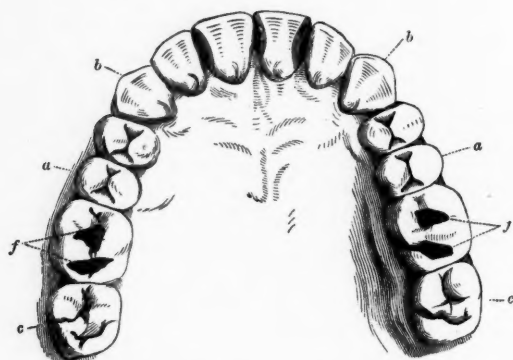
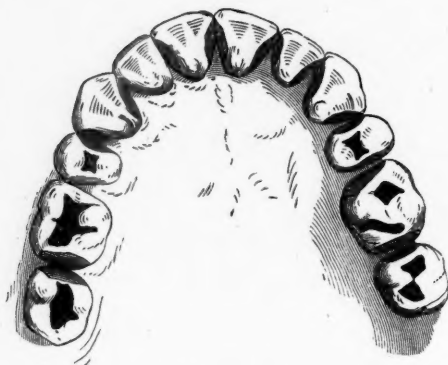
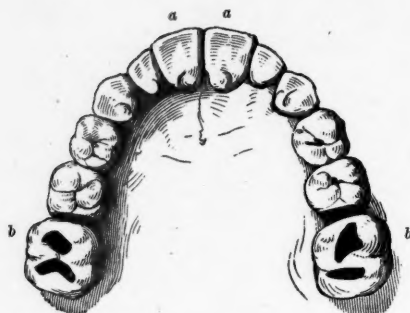
Then came, through the wisdom of Wm. H. Atkinson of New York, the use of the hand mallet for condensing gold, and following this the various automatic and electric mallets. Dr. Atkinson also introduced heavy gold foil for filling teeth, which was adopted by the leading practitioners of the whole country. This was about the fall of 1868 or the spring of 1869, and its use marks a period in operative dentistry when the quality of gold filling was of superior character to anything previously known. This gold ranged from 60 to 240, and the fact that gold as heavy as this could not be condensed with anything but a mallet caused important changes in plans of operating. First, it necessitated making every point of the cavity accessible to direct mallet pressure, and this resulted in widening the opening of the cavity to a much greater extent than before, and the practice of wedging the teeth apart became more general, all of which was wise procedure.

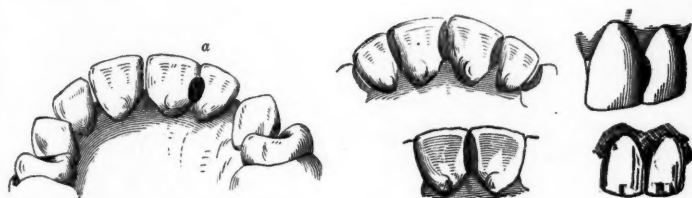
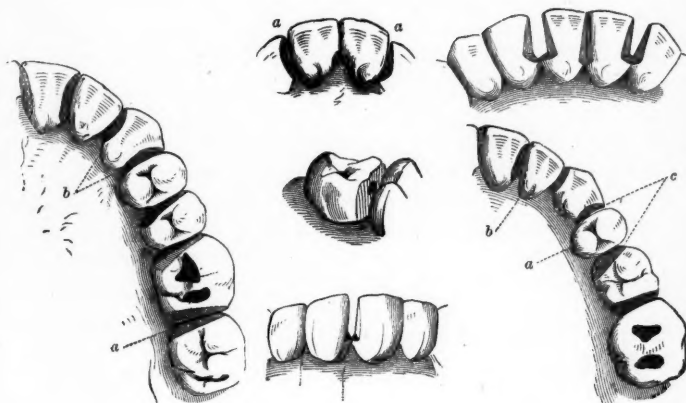
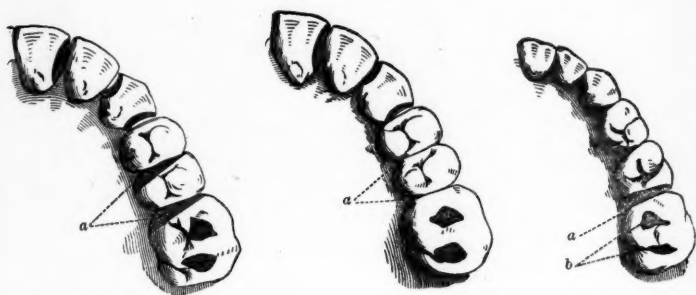
Close upon this came the invention of the dental engine. The first was brought into successful use by George F. Green of Kalamazoo, Mich., who was not a dentist but an inventor. This engine was propelled by air drawn through two flywheels by an exhaust bellows by the foot of the operator, and was known as Green's pneumatic engine. It had the objection of being very noisy, but otherwise was a superior implement. This he disposed of and soon brought out another which ran by electricity. I purchased one of the first of them and have the parts here with me. They give the plan on which the engine was run and also show the crudeness of the handpieces first used, which was characteristic of all of them, the bit or drill being forced into a socket by a pair of pliers. At the meeting of the American Dental Association in 1871 both Green's pneumatic and Morrison's treadle engines were first exhibited to the public. Soon after this cord, treadle and electric engines of various forms came into use.

It is not necessary to go into much of a history of these different appliances which have since been improved upon and brought to a high degree of perfection. With these superior instruments followed the abuse of their being too much used in practice; especially was this true in connection with the practice of cutting the teeth apart. With the use of corundum wheels and various cutting implements in the engine the operation of making extreme separations in the approximal surfaces of the teeth was much facilitated. At the period in dentistry referred to it was a common practice to make wide separations between the teeth as a means of gaining access to the cavity, as well as with a view of preventing the recurrence of decay. In fact, before the engine came into use the chisel and file were much employed for this purpose.

This practice was further encouraged by a treatise published by Robert Arthur, styled "Treatment and Prevention of the Decay of the Teeth." This book was written in an attractive manner and was adopted by a great many practitioners, and while there are a few operations therein described that can be used to advantage, the practice, generally speaking, proved to be detrimental and increased the already too prevalent practice of cutting teeth away for the prevention of decay. While it would not be wise in this paper to go into a review of this treatise by Arthur, I have had cuts made which illustrate the methods he advocated. The practice of cutting away the proximo-lingual surfaces of the six anterior teeth, where caries occurs on the approximal surfaces soon after the teeth have erupted, and thus removing the cavity, as illustrated in the cuts, I have found very beneficial. In the most extreme cases I do not recall one where decay recurred after this treatment; but the practice advocated for the molars and bicuspid, generally speaking, is faulty.

At the same time we wish to condemn as unwise the practice of separating teeth generally in the human mouth, both as impairing their efficiency as masticators of food, and also as being a method which causes destruction of the sockets of teeth, when spaces are made which allow food to press between the teeth and impinge on the gum tissue. We hardly think it worth while to go much into the details of the evil of this kind of practice, except with a view of emphasizing, which may as well be done here as anywhere, the importance of completely contouring the interproximal space of the bicuspid and molars as a means of increasing the usefulness in





chewing, as well to prevent the loss of the sockets through the injury to the peridental membrane, as above indicated. I feel justified in saying that I have had unusual opportunities of observing the effects of radical separating and the benefits accruing from restoring the teeth to their original contour, and no service that I have ever performed for patients was recompensed by such gratitude as the remedying of this evil, thus making the patient comfortable and in some cases restoring lost health that was apparently caused entirely by the lack of means of masticating the food.

Next in importance in the history of dentistry was the discovery of the real cause of dental caries, for which we are indebted to Miller of Germany, who was the first to give positive proof. This important discovery made it possible to practice dentistry with much more intelligence than when it was a matter of guesswork as to how caries was brought about, and therefore it is not surprising to find, in reviewing the various methods of practice up to that date, that many mistakes were made and theories and practices adopted which look unwise if not foolish in our present state of enlightenment.

However, a method of practice has been advocated to which we now call attention, and the adoption of which is unexplainable, except on account of its extreme and radical ideas. I allude now to what is known as "The New Departure" theory, and probably no one thing ever brought before the profession has been so harmful as the practice of this theory. While it was launched twenty odd years ago and has been kept before the profession more or less ever since, still it might be well to here give a little review of it. This "New Departure" creed was promulgated by S. B. Palmer of Syracuse (1874), J. Foster Flagg of Philadelphia and Henry S. Chase of St. Louis (1876). Let me repeat here some of the propositions which constitute their theory. According to Palmer, electricity was an important element in the destruction of the tooth substance when filled with metal; his idea being that there is chemical and galvanic action upon the teeth and metal used for their preservation. This electric theory in various forms was advocated by others before this, and Bridgeman wrote an attractive article on the electric theory in 1861. We think this, however, of all of the electric theories as causing the destruction of tooth substance—if they do not stand absolutely disproven, the proof of their correctness has never been established, and this part of the "New Departure" belief is still

surrounded by mystery. The other and more prominent phase of the "New Departure" theory was that gold was incompatible with tooth substance, and that it was too hard a material to pack against the walls of dentin or enamel. This was especially true of what they called frail or soft teeth, that gold, being untouched by acid where defects occur or where decay recurred, the tooth substance was acted upon wholly, and so the destruction went on more rapidly than where a substance was used on which acid operated also; therefore the material that was affected by acid was better; that a leaky filling was better than one that did not leak, proof of which was offered by the assertion that a filling made with gutta-percha was the leakiest and yet the best filling. In short, the proposition was to abandon gold and substitute plastics as the main filling materials.

When we take into account the fact that scientific investigation of the character of all amalgams and plastics has proved that all these materials, at the date alluded to, were so defective as to be wholly unreliable for permanent fillings, the wonder is, that so many sensible practitioners were misled by the theories promulgated, the carrying out of which worked the greatest amount of injury imaginable to operative dentistry. This is especially emphasized when we consider the more recent investigations of Dr. Black on the physical characteristics of tooth substance, which disprove the only element on which the "New Departure" theory had a semblance of truth—this is to the effect that the specific gravity and the qualities of teeth in their natural state are very uniform; that the tooth substance is harder than the filling materials used, including gold. Barring the recognized faults of form which give lodgment to food debris, fissures, imperfect closure of the lines of junction of the enamel plates, etc., as the conditions favorable to the beginning of caries, the theory that some teeth are soft and some hard in their natural state, and decay more rapidly on account of this difference, I think is proven to be incorrect. The cause of rapid decay and recurrence of decay is due to the peculiar characteristics of the secretions and the surrounding environments. It requires further investigation to prove what these different conditions are and this is one of the mysteries yet unsolved. I refer to these investigations of Dr. Black's because, although they were made public five years ago, I believe they are as yet but imperfectly understood; but that when

recognized they will cause a radical change in methods of practice. I have made a condensed summary of his investigations and conclusions, which will appear in print next month, giving the substance of what he has written, which I hope will be read, so that his conclusions will be more fully understood. If his deductions are correct, and I believe they will be found to be so, methods of practice must be conducted accordingly.

The investigations by Drs. Black, Wedelstadt and others, pointing out the great imperfections in amalgams, and the cause of these defects, led to experimentation which has shown us that it is possible to make amalgam so free from the defects which have characterized it in the past as to make it one of the most valuable filling materials known. The furnishing of the improved alloy has not completed the reform, however. A better understanding of the physical characteristics of this material is much needed by almost all practitioners, in order that it shall be manipulated properly and the preparation of a cavity so made as to insure more perfect results. Although much has been said and written about how to prepare the cavity and how to manipulate the amalgam, the course still pursued by the general practitioner is so lacking in the essential features as to make amalgam fillings very defective even when the material itself is not at fault.

For the purpose of enlisting discussion so as to secure a better understanding of the proper methods of manipulating amalgam, I will venture to give a little in detail the essential points to be observed in its use. In doing so I will also discuss some of these physical characteristics alluded to, speaking first of the peculiarity of this material to shift under pressure. A stiff-working, quick-setting amalgam is found to be the most desirable; and where the cavity has not four walls a metal matrix should be used, which should be made secure in some way—tying or setting with cement are probably the most desirable methods. Careful investigation has proven that it is desirable to use much more force than is generally used in packing the amalgam, otherwise the mass will be porous and imperfect at various portions.

The action of amalgam denominated by Black as "flow" is another of the characteristics which should be kept well in mind in its use. This peculiarity accounts for what was originally thought to be spheroiding. In short, it is this, that pressure upon the mass

causes it to change its shape, so that the bulging seen where it has been in use in the mouth is due to this "flow," and the cavity should therefore be prepared with a knowledge of this characteristic. Briefly, the cavity should have no sloping edges; the walls should be perpendicular, and the base for the filling to rest upon flat or square. Time will not allow further elaboration, but we hope sufficient has been said to call out discussion on this subject.

The cements in use are still very imperfect and the improvements in them thus far have not been marked, but as we have papers to be read on this subject I will leave them to discuss our needs in this direction.

To summarize, what have past results and experiences proved? First, that the practice of filling with non-cohesive gold in the form of cylinders is too valuable to be absolutely abandoned; that non-cohesive gold in form of cylinders can be used to a great advantage alone or in connection with cohesive gold, by using the cylinders at the cervical margins of large proximal cavities and finishing and contouring with cohesive gold, thus saving time and making the operations safer at the most dangerous point.

Second, that the use of heavy gold, say No. 10 or 20, can be packed into the cavity more uniformly and with less pressure than lighter gold which is matted into cylinders and blocks, for the reason that the gold is kept more even and is thus more easily condensed. To make these operations perfect the importance of securing plenty of space need not be urged, as this will be admitted.

Third, that where the ravages of decay are the most active, or perhaps we had better say, where the teeth are very frail, gold is by far the most suitable material with which to bring about the desired results.

Fourth, that in very young patients gold is not so desirable for large operations, not because of the teeth being too soft, but because the peridental membrane is more likely to be disturbed and injured by the malleting at so young an age. The same is true of patients where the teeth have a tendency to loosen from loss of alveolar processes, or what is familiarly known as pyorrhea—a disease not as yet well understood. In such teeth the injury to the peridental membrane by malleting makes gold less desirable than a material that can be inserted with less force.

Fifth, that it is wise practice to protect the danger points by ex-

tension of the cavity where decay is likely to recur beyond the filling. In this, however, as in most of the practice of dentistry, good judgment is a prerequisite.

Sixth, that where the masticating surface is impaired by open spaces, either from teeth having been formerly cut away, or from decay, or from whatever cause, they should be overcome by contouring, and the patient be given every chance for mastication.

Seventh, that the great field yet unsolved is to ascertain the cause of dental caries. To know how decay takes place and why it takes place in one mouth and not in another, or in the same mouth at one period of life or under certain physical conditions and not in another, are the problems of the day. Every practitioner must have seen in an examination, say of a little child whose deciduous teeth are fully erupted, that in one or several cases extensive caries is in progress and then in examination of another we see the surrounding tissues in a perfectly healthy condition and no caries. This illustration would also hold true with adults. What conditions are present to make these conditions? Who will solve the problem?

VALUE OF PROFESSIONAL ORGANIZATIONS.

By F. S. KNAPP, D.D.S., PLATTEVILLE. READ BEFORE SOUTHERN WISCONSIN DENTAL ASSOCIATION, AT JANESVILLE, MAY 3-4, 1899.

"No man lives to himself alone" is a statement universally true. As vegetation depends upon sunshine for growth, so man depends upon man for development. Civilization is the product of exchanged ideas suggested by man coming in contact with man. Cities are the outgrowth of two or more individuals, each feeling his dependence upon the other. Professions, occupations and trades are largely what they are through the brotherhood of men with common interests, for common interests make men brothers.

One man believes in law, another in medicine, another in theology. They meet as friends, not as brothers. Indeed they cannot be, for mind and talent run in opposite directions, and they cannot meet each other on a common level. Hence the value of professional organizations. First, they bring men of like professions into more friendly relations and create a brotherhood that grows and strengthens into mutual friendship. Again, men in like professions labor in different fields under different circumstances. Each locality has its advantages and disadvantages. Each individual left to him-

self will narrow or conform himself to his people and finally become fit only to serve locally, and thereby limit his usefulness. Professional organizations give to each man not only the benefit of his brothers' experience, but their opinions on different or conflicting points. Thus it broadens the man and fits him for a more useful life. No man can hope to hold the highest place, or even a high place in his profession without the exchange of ideas. Thirdly, mutual contact makes mutual friends; we must know to appreciate. It is a sad fact that there is a lack of professional courtesy among professional men. This must be overcome before the dental or any other profession can hope to reach its zenith.

How easy to criticise; how easy to antagonize; how easy to abuse our brother in a professional sense and feel no pang of conscience because we have not attacked his private but only his professional character. When we say that which affects him professionally we fail to realize that we tarnish his good name, in that sense destroying his usefulness, and gaining nothing ourselves, for wise men to-day fear one who speaks evilly of another. Professional organizations will bring us together and cause us to feel a common interest in a common prosperity.

Dr. Crane, the man whom you honored one year ago with the title of president of this society, was a man who had combined in his heart the principles that go to make up the truly professional man. From his short life among us we gather inspiration for the future. We lament his early death, but rejoice in the fact that honor and moral principles like those which ruled the motives of his life can never die or vanish from our memories, but will with new force live in our lives and inspire us for good.

A STEP IN ADVANCE IN THE TREATMENT OF "RIGGS' DISEASE."

BY G. ALDEN MILLS, D.D.S., NEW YORK. READ BEFORE THE MASSACHUSETTS STATE DENTAL SOCIETY, MAY 1 AND 2, 1898.

That we may know we have taken a step in advance, it is quite necessary that we note the beginning from the time the late Dr. John M. Riggs made his first public announcement, on the steps of the Capitol Building in Boston, to a small coterie of dentists, myself being one of them, concerning his method of dealing with the disorder in question. There has been an increasing attention to any

and all theories that have been promulgated, and some things have been said that have added to our fund of knowledge; but much has brought only confusion and led into deeper ignorance. Even to-day we are compelled to note the degradation of some of our journals, both the page of reading and the editorial page giving out statements of results in cases that, if rightly relegated to their appropriate place—the waste basket—would never have disgraced our literature nor the author's name. It is more than folly to publish "so-called" facts, stating that "God Almighty could not tighten such teeth," and then giving a ludicrous and false description of their condition, adding that they were treated and became firm as ever. Such reports may deceive younger men, but not older ones.

We should not have emphasized this flagrant abuse of our channels of information, nor have noticed these things, had they been given out for once as dropping from some one's lips carelessly. But they have been reproduced in several journals, as well as in an editorial from the one giving them out, and also an ardent letter was twice produced in journals, reiterating the statements (ad nauseam) which have altogether called out a good deal of strong criticism. No one could be placed in a more unenviable position than he who claims such impossible success.

Dr. Riggs' first and all of his teaching gave us the surgical treatment only, but this did not cover the ground to which the surgical applies to-day. It is to the surgical treatment that we must look for local dealing. In a major part of this it will require the surgical instrument, but we are in possession of knowledge to-day that leads us to take a larger view of what is surgical. Dr. Riggs' system was a studied-out method, matured from several years of faithful and intelligent observation, and so far as this part of his system can be applied, nothing more effectual has come to us since by instruments.

All the men that have had the example and teaching from Dr. Riggs personally can bear testimony of the truthfulness of our statements concerning the efficacy of his practice, and those who have become adepts are able to vouch for the truthfulness of all that he claimed. A great deal of what has been given out in our societies as treatment has not evinced a knowledge beyond a purpose to do something that would give temporary relief and prevent the patient from going to any one else.

A multiplicity of medications has been advocated for dressing the

pockets or pouches, after the surgical treatment by instrumental aid. But our experience has shown us that nothing is gained over the purely instrumental mechanical dealing—reducing the diseased parts to a condition of simple wound and leaving in it nature's clot of blood, and if anything be applied for future betterment, let it be stimulating washes specially prescribed for the case, assisted by antiseptic gargles if indicated. Our practice has found this method of procedure satisfactory, and we wish to take decided issue with many who turn aside from a further aid needed in many cases, namely, constitutional medication. Such operators have much to learn. We shall not argue the question of the dentist stepping out of his domain and trespassing upon medical territory. Knowledge has a moral right to go anywhere in the domain of usefulness.

We must refer to the book lately published by Dr. Henry S. Nash of New York, upon the subject we are considering, and we would particularly emphasize the chapters on "Idiopathic Alveolitis"; for they deal with the idiosyncrasies of the subject in hand as has never been attempted before. We are more and more convinced that light has dawned upon us which will prove of much practical value. Here we would give what we consider an *advanced step in treatment*, which has so far proved successful. After studying Dr. Nash's views on the initial step of the disorder which he has termed "Idiopathic Alveolitis," we find he makes a decided distinction from the general view of considering this disorder that we recognize under the familiar terms "Riggs' Disease," "Pyorrhea," etc. We believe that this disorder, as viewed by Dr. Nash, has its origin in neurosis, and its exciting cause is in the neural substance embodying what goes to make up the nerve tissue; and this disturbance is set in motion by many kinds of invasion, both constitutional and mechanical. As we become more versed in this line of knowledge we shall be able to make a more intelligent discrimination between constitutional and mechanical.

Those that are dealing with this disorder in a general way have come to know that all cases do not respond satisfactorily, and they have seen all their treatment to be futile, as the teeth dropped out, and in not a few instances without a particle of deposit attached to the roots. Many of these cases are connected with isolated conditions of disturbance after seeming to be sustained only in a quaggy condition. A milky, glue-like substance weeps out sluggishly, and

though you may for a short time check this flow, to your dismay it will reappear. We think we have oftener noted this in connection with the grinding teeth, small and large, although sometimes with the anterior teeth.

To make ourselves a little more plain, we will note a case such as you may have seen and failed to succeed with. Lately a dentist sent us a patient that he had treated, but without success. The tooth was a second bicuspid, and very loose. We saw a fistula near the margin of the gum, so probed it and found a discharge such as we have described. We first dressed the disordered territory with an obtunding medicament, and by treating enlarged the opening enough to remove all of the disturbed hard tissue with a bur. Leaving this for twenty-four hours, we devitalized and removed the pulp, opened the foramen and forced our medicine into any disordered territory that might be remaining, filled the pulp canal and crown cavity, and awaited the results, which proved absolutely successful. The tooth, after two months, is seemingly as firm as ever, and we think it proves the thought given above, namely, that there is some pathologic condition that produces the continuation of pus formation, and that ultimately becomes ichorous and causes the dissolution of the apex of the root, which we call, rightly or wrongly, absorption. Further thought and practice will confirm or deny what we have presented.

PRESERVATION, NOT DESTRUCTION; OR BROACH INSTEAD OF FORCEPS.

By W. G. HALES, D.D.S., MINERAL POINT, WIS. READ BEFORE SOUTHERN
WISCONSIN DENTAL ASSOCIATION, AT JANESVILLE, MAY 3-4, 1899.

The public at large is beginning to realize and appreciate more fully the masticating machinery given by the Almighty, and parents are now placing under our care the welfare and preservation of the teeth of their mere infants at the first indication of decay. The public is beginning to awaken to the fact that the dentist in advising the preservation of the temporary teeth is doing a humane act, relieving the child of many hours of suffering; obviating the necessity of early extraction; retaining them in a healthy condition to properly masticate the food during the period when nourishment is most needed for the proper upbuilding of the body; retaining them with vital pulps to assist in the proper formation and develop-

ment of the permanent teeth, and assisting also in their proper eruption.

At one of our former meetings the statement was made that a patient was first brought to our offices by the presence of pain. This is true in a majority of cases, yet we all have a class of patients who regularly seek our counsel and advice, having their teeth examined, and if need be, properly treated and filled.

It is the first class, the majority, with whom I wish to deal. I, myself, belong to this class, and perhaps many of you may be included, for most dentists and physicians dread the tortures of our calling. We will take an imaginary case: A parent, usually the mother, enters your office leading a child perhaps four or five years of age. The child has been suffering the pangs of toothache for hours, perhaps days. The mother has applied all manner of remedies without avail. She has exhausted her own supply and used up those of her neighbors, yet given no relief. It is the first visit the child has paid you. He comes with the one idea, to have that tooth extracted. He is very anxious to get rid of this offender. Are you going to extract the tooth? In most cases no, because at that age it is much better to relieve the pain and properly treat and fill the tooth. The child may feel a little disappointed, yet you have done your duty. By relieving the pain and saving the tooth you have gained the confidence of both child and parent, and have retained the tooth for perhaps years of usefulness. You have secured a good patient for future work. While on the other hand, had you extracted the tooth, you no doubt would have relieved the trouble, yet the child would always remember his first painful experience, and his remaining teeth would suffer for want of proper attention. He would have no desire to visit you in the future, and would even try to avoid you on every occasion.

In devitalizing the pulps of deciduous teeth I use carbolic acid on nerve fiber; as a root dressing one of the essential oils or carbolic acid; and for root filling gutta-percha cones, cotton and chloropercha, or cotton and oxychlorid of zinc.

Having briefly considered the temporary teeth we will now confine ourselves to those of the permanent set. A careful diagnosis of each case is quite essential before any treatment be attempted. What trouble arises from the pulp and what from the peridental membrane are questions worthy of our careful consideration. In cases of acute

pericementitis the tooth is extremely painful to pressure, for where a tooth is in a healthy state it responds to the slightest pressure, showing that the peridental membrane is the organ of touch, so when this membrane becomes diseased or inflamed this sense is greatly increased. The change of temperature does not affect the membrane, while a tooth with either exposed or diseased pulp is quite sensitive to thermal changes and not affected by pressure, except when applied directly to the nerve. When the pulp is affected before the inflammation has reached the peridental membrane the patient finds it impossible to locate the trouble. He may complain of pain in or about the ear, beneath the eye, or in any remote part of the face, but when the inflammation has reached the membrane the disturbance is easily located.

In cases of pericementitis before the inflammation has reached the pulp the application of counter-irritants, plasters or the free use of lance will usually relieve the trouble. Where the pulp becomes involved the tooth must be opened into if not already decayed to the pulp, and the decayed and decomposing matter removed, antiseptically treated and filled. In some cases of exposure where capping is not possible, the first thing to be done is to use a soothing application to relieve the pain and reduce the congested condition and then employ some agent to destroy the vitality of the pulp. I employ both cataphoresis and a nerve fiber composed of cotton, tannin, arsenic, creosote and morphia, which I like much better than the paste. I allow the fiber to remain in anterior teeth twenty-four to forty-eight hours and in the posterior four or five days, or even longer. I cover this treatment with either the dressing seal or phosphate of zinc, and do not rely on cotton and varnish or even beeswax. I prefer to exercise a little precaution rather than produce an ugly scar or sloughing sore upon the soft tissues. After devitalizing the pulp, or in cases where we find it already dead, my mode of treatment briefly is as follows:

Wash out the cavity of decay freely with warm water and adjust the rubber-dam. Make a free direct opening to the pulp chamber, reaching the mouth of the canals, remove all of decayed matter and softened dentin, thoroughly dry out the cavity by aid of alcohol, absorbents and warm air. Then take a loose pellet of cotton saturated with borolyptol and swab out the cavity freely. This removes most of the disagreeable odor so offensive to both patient and ope-

rator. Then take the nerve bristles and Gates-Glidden hand drills and remove the contents of the canals. In small tortuous canals use diluted sulfuric acid, which is a great help. Even if this solution did no more than locate the smaller canals, it would be a very valuable agent in root treatments. After removing the contents of the canals, dry out thoroughly and treat with any good antiseptic dressing. As a root dressing I use oil of cassia or peroxid, leaving a dressing in the roots, and seal the same with gutta-percha and dismiss my patient.

At the next appointment, if the tooth has remained easy and free from soreness, and I can detect no odor or discharge upon a clean piece of cotton inserted in the canal, the case is ready for the permanent root filling. I do not advise immediate root filling except in the most favorable cases. I would much rather remove an unnecessary root treatment than a permanent root filling. I use as a root filling the gutta-percha cones, cotton and chloro-percha or oxid of zinc. Before opening into a tooth with instruments I place my broaches and drills into a short, large-mouthed bottle in which I keep a fresh solution of borolyptol. I take my instruments from the bottle to my work in the mouth in such a manner that in removing the contents of the canals I am carrying a certain amount of my antiseptic with them, thus counteracting some of the diseased conditions I encounter.

I have briefly outlined my mode of treatment for ordinary cases, and of course it can be varied to meet existing circumstances. In conclusion, I think we to-day are saving at least one-half more teeth than we did formerly. I know in my own practice that instead of spending one-half of my time in the laboratory constructing artificial dentures, I now use at least fifty per cent of that time treating and saving teeth which I would formerly have extracted.

EDUCATING THE PUBLIC DENTALLY.

BY B. C. CAMPBELL, D.D.S., LAKE GENEVA, WIS. READ BEFORE SOUTHERN WISCONSIN DENTAL ASSOCIATION, AT JANESVILLE, MAY 3-4, 1899.

In these days there are more persons seeking admission to professional life than ever before, and we often hear it said that the dental profession is rapidly becoming overcrowded. A superficial view of the situation would seem to lend color to this idea, for there was never yet a time in the history of dentistry when anything like the

present number of candidates sought admission, yet we believe a deeper and more careful study of the situation will prove that the dilemma will not exhibit itself in this direction.

If one stops to consider the amount of dental service that is really required in a community in order to give the people the greatest possible use of their dental organs, it will be seen that only a small per cent of that service is rendered. The question then for us to solve is not how to discourage the admission of new men to our ranks—*provided always that they are good men and properly qualified to practice*—but the education of the people up to an adequate appreciation of the necessity for giving the teeth proper attention.

All operators will admit that the more intelligent the patient—all other things being equal—the greater and more satisfactory the results will be. I refer of course to dental intelligence, for it is well known that information, education and refinement along other lines have no correspondence with dental knowledge, for we have often found persons intelligent and well informed in other respects to be woefully deficient in this direction. If a profession has any one function more than another that stands out as its manifest duty, it is an educational one, and unless we impart some of our special knowledge to the masses we are falling short of doing what every conscientious man pledges himself either mentally or verbally to do when he assumes the duties of professional life.

It is an undeniable fact that unless we can educate the people in a ratio to meet the demands caused by the present influx into dentistry, the cry of the alarmist will be well founded, and when that time does come it will be largely the fault of the profession rather than of the people. If the public are to have anything like a just appreciation of the value of their dental organs, greater effort will have to be put forth in the way of education.

In many of the other arts and sciences there is a vast amount of popular instruction by the press, secular and religious. Take for instance electricity. Much has been written on this subject, and there is scarcely an intelligent person but has a fair idea of the wonderful inventions of various kinds that have been brought out. Often you see short, pithy articles calling attention to the care of the eyes or ears, to diet, the beneficial results of exercise and bathing, or the importance of sleep, and hygiene in its various manifestations; but it is a rare thing to see any reference to the care of

the teeth and hygiene of the mouth. This is certainly not because the dental profession is barren of the knowledge that the people ought to have, but rather because few aggressive efforts have been put forth in this direction.

By virtue of an act of the municipal council of Paris in 1881, the children of the public schools of that city have their teeth examined twice a year. Proper instruction in addition would supply knowledge of lasting benefit, the importance of which the public does not realize, from the fact that it is almost totally ignorant of the conditions and results which prevail in the mouth.

Two avenues are open whereby we may be able to reach the masses. The first through parents and teachers, and the second through the profession itself. In most of our town and city schools once a month the teachers meet in special session to discuss such subjects as will best prepare them for the most efficient service. There are also the parents' meetings, which have been organized through the medium of the kindergarten department, where parent and teacher come in touch with each other on questions of common interest regarding the child. Can we not occasionally at these meetings present treatises on the care of the teeth and their allied parts, their function in mastication and importance in the proper digestion of food, etc.? This surely will result in the enlightenment of the public as to the importance of our calling and also demonstrate that a clean mouth is as essential to health as a clean skin. Parents are often religiously scrupulous regarding the bath, tidiness of the hair and manicuring of the hands, yet entirely forgetful of cleaning the child's teeth.

If we carefully examine ourselves shall we not find that we are seriously neglecting opportunities presented us in our office practice? We meet with children and occasionally adults who have been intimidated with gruesome tales related by parents and friends who have taken pains to relate their weird experiences and hair-breadth escapes in the dental chair. Hence over eighty per cent of patients seek our services through the suffering of pain rather than because of a high appreciation of the value of their dental organs. To such applies the truth, "If we would teach well we must teach often."

In conclusion let me say that the desirability of general instruction in dental subjects, both for the good of the people and the dental profession, the necessity for concerted action to secure recog-

nition of the importance of the subject by the authorities who have charge of the educational interests, and the necessity of thought and effort to stimulate a desire for this knowledge, are all apparent to those who consider the matter. Can we not then as members of this society take the initial step in advancing this subject in the state of Wisconsin by the appointment of an educational committee?

PREVENT NERVOUSNESS.—The value of local anesthesia under cocain or by any other means is very great. But it is well to remember that some patients are so nervous that if they see the steps of the operation they are likely to faint. It is more than likely that this has often given rise to the erroneous idea that the cocain itself was at fault. It is always best to cover the patient's eyes while operating, or to interpose the body of the surgeon or of an assistant in such a manner as to prevent the patient from seeing what is going on.—*International Jour. of Surg.*

FOREIGN BODIES IN THE PHARYNX AND ESOPHAGUS.—Robert Jones (*Lancet*, May 6, 1899) says that from a study of his own cases of esophagotomy he would submit the following: (1) That bodies which have lain for some time and given rise to symptoms of obstruction, irritation, or dyspnea should be operated upon without delay; (2) that forcible attempts at extraction by the mouth are to be condemned; (3) that sharp or irregular impacted bodies specially demand esophagotomy; (4) that in certain cases gastrotomy is indicated, and in some a combination of gastrotomy and esophagotomy; (5) that where the wound in the esophagus is jagged or its walls inflamed no stitches should be used; (6) that the routine practice where the esophageal wound is clean-cut is to stitch it up with a continuous suture, care being taken, as in the case of the intestine, not to pierce the mucous coat; (7) that only in very exceptional cases where no danger of suppuration and infection exists should the external wound be closed; and (8) that liquid food may be given by the mouth in about twenty-four hours after operation.

COCAINIZED CHLORID OF ETHYL FOR LOCAL ANESTHESIA.—M. G. Milian (*Revue Medicale*, May 24) speaks highly of hydrochlorid of cocain in one, two, three, four, or five-per-cent solution in chlorid of ethyl in tubes similar to those widely used for the ethyl alone. Eucain could also be used in the same way, but did not appear to be so efficient as cocain. In this method the chlorid of ethyl is not used for refrigerating purposes, but simply as the vehicle of the cocain, removing the fats from the skin, penetrating the superficial cellular layers thereof, and depositing the cocain in their interstices. The advantages claimed for this proceeding are the obviating of hypodermic injection and the lessened liability to cocain intoxication. Moreover it can be used with the thermal cautery, since the operation is not begun till after all the ethyl chlorid is evaporated. The application may take place either by a pledget of cotton saturated with the medicament, specially serviceable when the part to be anesthetized is deep-seated or inaccessible, or it is desired to avoid affecting contagious parts, or by atomization. Anesthesia is obtained in about five or six minutes.—*N. Y. Med. Jour.*

Digests.

HINTS. By a Lazy Man. I claim no originality for anything I possess, excepting original "sin." But I give these hints as I've gathered them from chats with my confreres. They were new to me. They may be new to others like myself, who accept good ideas no matter where they come from.

1. **DARK JOINTS.** If your set has dark joints dip a sharpened point of wood into aromatic sulfuric acid; put a few drops into each joint, let rest a few minutes, wash with water.
2. Do not hammer plaster impression out of your impression cup. Cut off overhanging surplus; hold the cup over a flame, the plaster will fall out.
3. To get a correct bite make patient lean his head forward; depress his chin until it touches his breast, then bite.
4. To get good impression with wax, wax and paraffin, or the compound, take impression as usual, but not fully; then remove and gently soften surface over a flame and reinsert, press into place, let it cool.
5. Cotton twisted on the mandrel of the lathe can be made to reach any hole or corner in polishing plates.
6. When you have gray spots in black rubber, try Dr. Barrett's plan of rubbing them with carbon bisulfid.
7. For heating rubber try Dr. Beacock's suggestion of a soapstone slab. The rubber does not stick to it. I always wash every sheet of rubber with a nailbrush before cutting.
8. The wire-spring laboratory apron now on the market was first suggested by Dr. Beacock, of Brockville. I wish he would give us more of his good ideas.
9. After using clamps and ligatures and wounding the gum, massage the parts with the finger and camphor or alcohol to revive the normal function of the constricted gum.
10. Paint the model with thick lather of soap before packing. It prevents plaster sticking to plate.
11. If your gas-bag bursts coat a piece of vulcanized rubber with chloroform, and press it for a few moments on the break.
12. Try Kirk's plan of sterilizing instruments. Soak them for a few minutes in a warm aqueous solution of liquid ammon. fort.—*Dominion Jour., July, 1899.*

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AN INDESTRUCTIBLE PIN CROWN. By Dr. F. R. Sandusky, Nashville, Tenn. In cases of direct occlusion of the teeth (especially in the mouths of men well advanced in years) it is a difficult matter to insert porcelain for either single crowns or for abut-

ments for bridge-work that will meet the necessary resistance of occlusion without causing fracture of the porcelain, and in trying to obviate the usual result attending such practice I have recently constructed for these cases an indestructible pin crown, which may be used with much satisfaction for single crowning or for abutments. I am as bitterly opposed to the insertion of all-gold crowns in the anterior part of the mouth as any dentist could possibly be, but when we have cases presented to us for treatment requiring a crowning operation it is at least a pleasure to know that you are able to construct a bridge or crown which, although unsightly, is serviceable. *Under no consideration* would I place in the anterior part of the mouth of a lady patient an all-gold crown of any description, even though urged to do so, knowing, as most other dentists know, that requests for that kind of work seldom if ever come from ladies of refinement.

The crown I suggest is very eminently adapted to use in cases of old gentlemen whose teeth are slightly or greatly worn from force of mastication in *direct occlusion*. The indestructible pin crown came to my mind as a necessity for an abutment in a bridge in the mouth of a patient who offered this difficulty to overcome. The case was not only direct occlusion, but in addition there was a sliding or slightly lateral pressure brought to bear. When the jaws came together and as often as porcelain was used, just that often I had to reconstruct the bridge. The root of the upper right cuspid, acting as the anterior abutment of the bridge, had previously supported a Richmond crown, and as it had been carefully shaped in the first operation it offered an especially good foundation for my all-gold pin crown. A band-cap and pin were made exactly as for a Richmond crown; the cap band and pin being soldered and dressed down were placed in position on the stump, bite and impression obtained in modelling composition, and the upper part of the model run in sand and plaster (sand one part, plaster three parts). After separating, a small piece of modelling composition heated in dry heat was placed on the cap, the exact position formerly occupied by the porcelain facing, and by bringing the two halves of the crown articulator together an accurate position of the opposing lower teeth was obtained; holding the articulator in this position, I carved the labial, mesial, and distal surfaces exactly to represent the original tooth, after which it was carefully removed and an impression of it

taken in moldine, a die of fusible metal run, and from a piece of 22-carat 32-gauge gold plate swaged a *hollow gold facing* which when placed in position on the model fitted accurately every part, as did the compound after carving. The *gold facing* was then waxed into position on the model, invested and contoured on its palatal surface with 20-carat solder, finished and placed in position. An impression for the bridge (extending to the second molar, it having previously been fitted with a gold crown) was constructed in the usual manner of using solid dummies. Since using the pin crown in this case I have tried it in a number of others, and in each instance have been rewarded with the same result, that of entire satisfaction both to myself and the wearer. I have never read of a similar crown in any text-book or journal, nor have I ever seen it demonstrated. I therefore take pleasure in submitting it, knowing from personal experience that it is not only much more sightly than the average gold cuspid crown made with contouring pliers and other devices, but by its use it is easy to overcome the difficulties encountered in cases of direct occlusion.—*Cosmos, May, 1899.*

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THE WORM TURNS. "It takes money to run a newspaper."—*St. John (Kan.) News*. What an exaggeration! what a whopper! It has been disproved a thousand times; it is a case of airy fancy. It doesn't take money to run a newspaper. It can run without money. It is not a business venture. It is a charitable institution, a begging concern, a highway robber. A newspaper is the child of the air, a creature of a dream. It can go on and on, and any other concern would be in the hands of a receiver and wound up, with cobwebs in the windows. It takes wind to run a newspaper; it takes gall to run a newspaper. It takes a scintillating, acrobatic imagination and a half dozen white shirts and a railroad pass to run a newspaper. But who ever needed money to conduct a newspaper? Kind words are the medium of exchange that do the business for the editor—kind words and church sociable tickets! When you see an editor with money, watch him. He'll be paying his bill and disgracing his profession. Never give money to an editor. Make him trade it out. He likes to swap!

Then when you die, after having stood around for years and sneered at the editor and his little jim crow paper, be sure and have your wife send in for three extra copies by one of your weeping

children, and when she reads the generous and touching notice about you, forewarn her to neglect to send fifteen cents to the editor. It would overwhelm him. Money is a corrupting thing. The editor knows it; what he wants is your heartfelt thanks. Then he can thank the printers and they can thank their grocers!

Take your job work to another job office, and then come and ask for free church notices. Get your lodge letterheads and stationery printed out of town, and then flood the editor with beautiful thoughts in resolutions of respect and cards of thanks. They make such spicy reading, and when you pick it up filled with these glowing and vivid mortuary articles, you are so proud of your local paper!

But money—scorn the filthy thing. Don't let the pure, innocent editor know anything about it. Keep that for sordid tradespeople who charge for their wares. The editor gives his bounty away. The Lord loves a cheerful giver! He'll take care of the editor. He has a charter from the state to act as doormat for the company. He will get the paper out somehow; and whoop it up for you when you run for office, and lie about your pigeon-toed daughter's tacky wedding, and blow about your bigfooted sons when they get a \$4 a week job, and weep over your shriveled soul when it is released from its miserable hulk, and smile at your giddy wife's second marriage. Don't worry about the editor—he'll get on. The Lord knows how—but somehow.—*Cohocton (N. Y.) Times*.

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TOBACCO IN ITS RELATION TO ALCOHOL. It is often stated that the use of tobacco leads generally to overindulgence in alcoholic drinks by creating a craving for them, but this has been strenuously denied. In *Modern Medicine*, July, Dr. J. H. Kellogg brings up numerous facts that seem to him to show a very close relationship between the two habits. He says:

"A very conspicuous fact in reference to these drugs is their exceedingly common association in use. Quite a considerable number of persons may be found who make use of tobacco without habitually using alcoholic liquors; but the number of persons using alcohol who do not use tobacco in any form is exceedingly small. This fact may be attributed to two causes: 1. The use of tobacco is usually begun at an earlier age than the use of alcohol (this is true at least in the United States), the use of alcohol being later grafted on as a result of the associations to which the use of tobacco

naturally leads. 2. The use of tobacco creates a demand for the use of alcohol (*a*) by the production of a drug habit which naturally leads to the development of other habits of kindred sort, and (*b*) by the production of morbid conditions and discomforts from which alcohol affords temporary relief.

"If, as has been argued, the tobacco habit is a rival of the alcohol habit and a substitute for it, so that smoking and other forms of tobacco using should be encouraged as a means of antagonizing the use of alcohol, we should expect to see, as a result of the early acquisition of the tobacco habit, two general classes as regards the use of alcohol and tobacco—one large class using tobacco only, and another smaller class making use of alcohol only. But instead of this we find practically these two classes: those who use tobacco only, and those who use both tobacco and alcohol. It is evident, then, that the use of tobacco is not a protection against the use of alcohol, but rather an introduction to it."

Dr. Kellogg lays special stress on the fact that the physiological effects of tobacco create a distinct craving for alcohol, which is a temporary antidote for those effects. He says: "Perhaps one of the most characteristic effects of tobacco is the excitation of the vaso-constrictors produced by it, as is evidenced by extreme pallor of the skin. Alcohol, on the other hand, produces in moderate doses the very opposite effect. The smoker finds himself suffering from dryness of the throat, thirst, general depression of spirits, perhaps slight giddiness, and some cerebral anemia. It requires but a single experiment to convince him that beer, wine or whisky, or alcohol in some form, affords very prompt relief from these distressing symptoms; hence the very natural association of cigars with wine or beer. The user of these two drugs, by their alternation, is enabled to secure a repetition of pleasurable sensations long after tobacco alone has ceased to elicit pleasurable responses to its stimulus by reason of the development of its recognized toxic effects. These facts I have verified in the treatment of many hundreds of cases of alcohol and tobacco addiction."

Dr. Kellogg states his belief that the alcohol habit cannot be radically cured while the patient continues to use tobacco, and that if we wish to check the growing tendency to alcoholism, which he regards "a disease of civilization," we must turn our attention first to the tobacco habit. He asks in conclusion: "Has not the time

fully arrived when those who recognize in alcohol a race enemy and one of the most potent causes of race deterioration, which at the present time is becoming so painfully evident, should also recognize in tobacco the strongest and most active ally of alcohol? And should not those whose efforts are directed against alcoholic intemperance seek likewise to oppose in every legitimate manner its brother evil, the tobacco habit, not only on account of its relation to the alcohol habit, but also on account of the evils which are the direct outgrowth of tobacco intoxication itself?"—*Lit. Digest.*

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PULP MUMMIFICATION. By Theodore Soderberg, Dentist, Sydney, Australia. In the *Cosmos* for May, 1893, Dr. W. E. Christensen communicated some comments on the Witzel and Herbst methods of treating devitalized pulps, and pointed out that the real effect aimed at by the two German dentists was the mummification of the pulps left untouched in root-canals. Previous to reading about "this treatment, which we may call simple, and at the same time scientific," I had followed the usually thought and practiced method of treating devitalized pulps, viz., to give my patients just the amount of strain and pain equivalent to the amount of my own bulldog perseverance with that exquisite instrument of torture—the nerve broach; then *trying* to fill the canals with gutta-percha or asbestos fibers saturated with some antiseptic; and then—well, the final result was not always my patient's comfort any more than my own glory. I discarded the old method and adopted Dr. Witzel's, commencing by using the following modified formula (his paste, as formulated by Dr. Christensen, being too thin to be workable): Hydrag. bichor. corr. gr. xxx; Morph. muriat., gr. xv; Ac. phenyl., gr. x; Ol. menth. pip., [gtt. j; Ol. caryophyl., gtt. j; Alum. exsicc., q. s. to make stiff paste.

This paste had, however, the drawback which all pastes containing mercury have—it caused discoloration of the tooth, at least when used in connection with steel instruments and amalgam.

Shortly afterward (September, 1893), the *Cosmos* brought out Dr. W. D. Miller's valuable contribution, "Concerning Various Methods Advocated for Obviating the Necessity of Extracting Devitalized Tooth-Pulps," and I at once commenced to experiment with different pastes to find one which would cause mummification of the pulp without discoloration of the tooth. The properties of

an ideal mummification paste can be shortly described thus: 1. It must contain an antiseptic sufficiently strong to prevent decomposition taking place while mummification sets in. Once mummified the pulp is (so at least, I believe) not very likely to become decomposed and putrid. 2. It must contain an ingredient which will as quickly as possible cause mummification (drying, shriveling) of the pulp tissues. 3. It must contain a substance which in conjunction with the other ingredients will impart a white color to the mummified pulp and prevent discoloration of the tooth. 4. It must contain an agent capable of binding the whole compound together in a pasty state, and making it penetrate deeply and quickly.

Besides Dr. Witzel's paste I have experimented with three of Dr. Miller's formulæ, using glycerol as the binding agent, viz: Sublimate, Thymol, equal parts; Glycerol, q. s.; Sublimate, Thymol, Tannin, equal parts; Ol. cassia, Thymol, q. s.; Glycerol, q. s.

Here again the disadvantage is—as pointed out by Dr. Miller—the discoloration of tooth, bluish-black by the mercury, yellowish-brown by the oil of cassia. My test tubes further show that where tannin is used in connection with either of these, or any other paste—especially if glycerol be used as a binding agent—the discoloration is more marked.

Experiments with twelve other pastes, first in test tubes, next with freshly extracted teeth, proved to my preliminary satisfaction that the following formula was the most reliable on the four points above enumerated: Dried alum, 3i; glycerol, 3i; thymol, 3i; zinc oxid, q. s. to make stiff paste. In this paste the thymol acts as the antiseptic, the alum as mummifying agent, the zinc oxid as coloring medium, and the glycerol as binding and penetrating agent.

Bearing in mind Dr. Miller's favorable recommendation of thymol, I adopted it as my antiseptic and fancy I shall not have cause to regret the choice. My reason for adopting dried alum was that its tanning properties are far superior to those of tannin or any other tanning agent—a statement which any practical tanner will indorse. [I have it on the authority of the senior partner of the largest tanning establishment in Sydney, that an ox-hide can be tanned with dry alum in less than one-tenth the time that any other substance consumes in the process.] Further, dried alum does not discolor the paste, while tannic acid, if substituted for the alum in the above mixture, produces a dark-brown paste.

I need hardly point out that glycerol, with its great affinity for moisture and its well-known penetrative power, is an excellent carrying agent for all mummifying pastes; further, that no better coloring medium can be found for the purpose in view than zinc oxid. Finally, the entire paste is non-irritating; I have in fact continually used it for other purposes, e. g., in deep cavities between pulp and filling material, etc.

I have used this particular paste for over twelve months and *so far* not one single case out of a total of ninety-seven has given any after-trouble (alveolar abscess). And here I may be allowed to state that neither have I so far had any after-trouble with any of the cases treated with Mr. Witzel's paste (from August, 1893, to date). I am perfectly well aware that neither one year nor two is sufficient time to warrant a guarantee of absolute success, and I acknowledge the truth of Dr. Miller's words, "Granted that the pulp becomes sterilized by the operation, this does not say that it remains sterile indefinitely."

I must here point out that my claims as a bacteriologist are *nil*, and so far as experimental chemistry is concerned my knowledge is only that of the average educated dentist. I am unable to make experiments with mummified pulps on infected agar culture, and I am unable to give the higher scientific reasons why and how the paste acts as it does. All I know is that it *does* act mummifyingly on the dead pulp, and that twelve months after that mummy is still a mummy, and not a soft, stinking horror.

My patients mostly belong to the so-called middle and working classes. For divers reasons they are not so careful with their teeth as are the members of the more cultured and moneyed classes; they don't as a rule think of visiting the dentist except when an exposed pulp acts as a vivid reminder. In short, my practice is such a one that I have to resort to my devitalizing paste very frequently. Hence excellent opportunities to see and observe the effect of the mummification paste. (And hence, also, the "kind o' sickly smile" wherewith I point out to my pupils Dr. Miller's angelic advice: "One or two cases every month—at least for the first year or two—is all that a careful dentist ought to risk in private practice." It is, however, a great consolation to me to read in the same article that over two hundred cases were treated with Dr. Miller's paste at the Dental Institute of the University of Berlin, with only one

failure on record.) I have tested the action of the mummification in the way that conforms best with my bent of mind and my inferior standard of scientific education. I have removed test fillings three, six, nine and twelve months after the pulp treatment took place. In all cases the same satisfactory result observed—mummification of the pulp. One case I especially wish to record. I had occasion to extract an upper third molar treated seventeen days previously. On immediately splitting the tooth, I found the pulp in the root-canals perfectly mummified down to the very foramina. Whether the experiments are carried out with the teeth *in situ* or with extracted teeth, the mummified pulps always present the same appearance, viz., a perfectly dry, parchment-like mass, with a faint odor of thymol, and a whitish color.

My mode of procedure is as follows: After the pulp has been perfectly devitalized (arsenic, cocain, alum, equal parts, glycerol q. s., sealing with sticky wax), I open up the main pulp-chamber and drill out its dead contents, leaving the root-canals untouched. I then fill the chamber with paste, and with a flexible bristle gently prick the paste into the pulps left in the canals (this, however, not absolutely necessary). I now seal with cement and insert amalgam or gold, as the case may be. I use rubber-dam or cup where possible—the main thing to keep out the saliva, at least until the first piece of amalgam has been inserted and burnished round.—*Cosmos*.

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SUCCESSFUL AND QUICK METHOD OF TREATING ALVEOLAR ABSCESS. By Dr. Isaac N. Carr, Durham, N. C. Read before the Tri-Union Meeting. I feel very much like offering an apology for presenting a paper before such a scientific body as this upon a subject that has been so much discussed, and were it not for the fact that we see in our daily practice so many failures resulting from misdirected efforts and improper treatment I would not venture to address you. To be brief and to the point, let me say that before any intelligent treatment can be instituted we must know the physical characteristics of a pulpless tooth, what the tubular contents are, as well as the character of the discharge through the canal. We know that the dental structure of a pulpless tooth is permeated with a combination of oils, fats, and animal tissues resulting from food particles and their decomposition. There are besides these probably always present in the decomposing contents

of the pulp-canals and tubuli, sulfer compounds from the decomposition of albuminous matters. These different materials claim our careful consideration in the selection of the proper compound to render the diseased tooth thoroughly aseptic. It should be a non-coagulant. The undecomposed contents of the dentinal tubuli and the presence of oily or fatty matters should be no barrier to its penetrative quality. Five years ago last March I believe we found such a compound, and I come to you to-day not with anything new, but to give you my clinical experience of over five years. Facts are stubborn things, and whether we believe in the theory of coagulants or non-coagulants in the treatment of pulpless and discolored teeth, the thing after all which we most desire is the *actual* results from clinical experience, realizing that one demonstrable fact is worth a thousand undemonstrable theories.

The compound I refer to, and which has proven so entirely successful in my hands, is sodium peroxid (Na_2O_2), and was first introduced to the profession by Dr. E. C. Kirk of Philadelphia, in March, 1893. It is not necessary for me to take up your valuable time in explaining exactly what this is, since you are all fully aware of its chemical composition. Suffice it to say, its pleasing and effective action upon foul pulp-canal and tubuli contents is due to the readiness with which it parts with its extra atom of oxygen and quickly attacks and seizes upon the hydrogen in the organic compound, in this way destroying all germs, dissolving the oils, fats, and animal tissue which permeate the dentinal structure, and which so often act as a barrier to the ingress of agents most generally employed. This, coupled with its fine bleaching qualities, renders it to my mind the material par excellence for the purposes for which it is employed. It differs from the hydrogen peroxid in one very important particular, that is, the amount of available bleaching oxygen. This is stated to be by the manufacturers, Messrs. Roessler & Hasslacher of New York, about twenty per cent, as against from three to four per cent in the ordinary commercial solutions of hydrogen peroxid. Now gentlemen, I can truthfully say that my experience with this preparation has been more pleasing and the results more gratifying and successful than anything I have ever used during more than twenty years of actual practice. I therefore speak to you confidently, and assure you that the results obtained are not fictitious, but are actual and can be verified at any time in the mouths of hun-

dreds of patients whose pulpless teeth are to-day living monuments to the efficacy of this simple but powerful remedy. Every case treated since April, 1893, has been carefully recorded in a book kept for the purpose, in which notes have been made describing conditions when presented and history of the case. Then, too, the cases have been kept up with and inquiries made from time to time of those patients who live in other towns as to how the teeth were doing, and also frequent examinations of the cases which annually or semi-annually come under my observation, and I can truthfully assure you that ninety-nine per cent of all the cases treated have been successful so far as I have been able to learn. Please do not think for one moment that I attribute this success to any skill that I may possess, but rather to the potency of the remedy.

Now with a short description of how I treat an abscessed tooth my efforts to entertain you will have ended. We will take a difficult case, a lower molar with the two tortuous and almost inaccessible canals generally found in the anterior root. Tooth is sore and throbbing, no fistulous opening and no filling. Wash out all *débris* from cavity with three per cent pyrozone, adjust rubber-dam carefully and securely, dry out cavity with absorbent cotton, open into pulp-cavity by cutting away as little of the crown as possible, wash out cavity and chamber with three per cent pyrozone again, then draw out the pyrozone by means of a syringe and dry again with cotton. Now you are ready to begin your real treatment. Take a minim syringe, and put one or two drops of a fifty per cent solution of sodium peroxid in the pulp-cavity; then with a fine, smooth platinum broach work the remedy into the canals, being careful not to use too much force; the broach will help the remedy to go to the apex and into the sac, if there be one present. You will now find that you have a soapy mass in the chamber; wash this out as before with three per cent pyrozone, draw it out with the syringe and dry again. Put another drop or two of the sodium peroxid in the chamber and use the broach again in the same manner, being always careful not to force any of the pulp-canal contents through the apical foramen; it does no harm if a little of the remedy should find its way through, and if there is a sac it must enter it, and by its own action will force the contents up through the canals. Continue this treatment several times until the saponifying action ceases, when the

chamber and mouths of canals will be found beautifully bleached, as well as sweet and clean. Now after all the sodium peroxid has been washed out by use of the three per cent pyrozone and minim syringe, and the cavity dried with absorbent cotton, a fine broach, made smooth and fastened in a little handle, is sterilized and a few shreds of aseptized absorbent cotton are twisted around the broach and the canals dried as well as possible by this means. Finally the same broach with a few shreds of cotton impregnated with oil of cassia and iodoform is carried down into each canal and twisted around so as to mop the walls of canals with the dressing, the cotton and broach are withdrawn, and the continuous current hot-air syringe is then brought into use. This will vaporize the oil and iodoform and cause it to permeate the dentinal structure of the tooth. The hot air should be used until the patient gives warning of pain from the heat. The canals are then dressed with cotton impregnated with the oil and iodoform, the chamber and cavity filled with temporary gutta-percha stopping, and the patient dismissed for two days, with instructions to report in the interim should any trouble occur. Not one in a hundred ever reports before the second day, when you are told that the tooth has felt perfectly comfortable ever since leaving the office, that the soreness is all gone, etc. You can now adjust your dam as before, and using antiseptic precautions, proceed to excavate and prepare the cavity for filling. This you did not do at first sitting because of the tooth being sore. The dressings are removed and their appearance indicates the healthful condition of the roots. You then fill them with whatever material you think makes the best root-filling. I use gutta-percha, and if the canals are very fine melt a little wax into them. I believe it makes no difference what you fill the root with, provided you seal the apical foramen hermetically.

Discussion. Dr. J. N. Crouse, Chicago, thought oxychlorid of zinc much better to seal the root with than gutta-percha, as the latter will leak.

Dr. G. Lenox Curtis, New York, said the practice described in the paper, if carried out, would result in success in a very large majority of cases, but it would be necessary to open up the sac at the end of the root and clean it up.

Dr. W. A. Mills, Baltimore, approved of the use of pink gutta-percha to fill the apex of the root. It will swell after insertion and

make a perfectly tight seal. In many cases it will extend quite beyond the end of the root, but its presence does not cause any irritation. The reason it is so perfect is because it leaks first and then swells up. The sac, if one exists, must be broken up or trouble will arise again, except in cases where nature intervenes and by the action of the white blood corpuscles encysts the sac.

Dr. L. Ashley Faught, Philadelphia, said that it was his practice to fill a canal with pink gutta-percha; but to let it extend through the end of the root will cause irritation.

Dr. David Genese, Baltimore, said that it made little difference what a pulp-canal was filled with, so the filling was stable; but in certain conditions anything that protruded through the foramen would set up irritation.—*Cosmos*, May, 1899.

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ETIOLOGY OF NEURALGIA OR NERVE CRIES. By Dr. A. H. Peck, Chicago. Read before Kansas State Dental Association, May, 1899. From the earliest time down to the present certain phases or symptoms of disease, the pathology of which has either been obscure or unknown, have been grouped under general terms, which have been constantly changed as time went by, and which in themselves have ever been in a great measure vague and uncertain. A few centuries ago all manifestations of disease that could not be accounted for by inspection or the ordinary methods of reasoning were explained by the varying conditions of the humors of the body. But this method of reasoning has had its day, and we now classify these disturbances as manifestations of a diathesis—*e. g.*, nerve-irritants in the blood, such as uric acid or toxalbumins, are made responsible for chronic rheumatism or gout; and again, the circulatory medium becomes impoverished and can no longer supply the nerves with the necessary nourishment and they cry out for the needed pabulum, and we call this neuralgia. Lodor, speaking of this subject, says: "The longer I study this matter, the more am I inclined to believe that a healthy nerve in a healthy perineurilemma does not ache, or if it does so, the case is rare." I have studied, observed, and recorded these conditions thoughtfully, carefully, accurately, and must say I am ready to accept his statement as true. The term "neuralgia" is by no means as definite and limited in its scope as many others, and why not eliminate it largely from our scientific vocabulary,

and confine it to the few rare cases where nerves ache for no apparent cause.

The sources of pain are almost innumerable, and with this introduction let us consider briefly some forms of pain not directly traceable to a definite cause. In this class the source of pain may be found in a nerve itself or in its immediate surroundings, or irritating substances carried to the nerve through the circulatory fluids may be the cause of the pain. In the first class may be grouped the following: inflammatory processes not classified as neuritis; old adhesions which are the result of inflammatory products, these oftentimes being present after cessation of the inflammatory process; changes in the perineurilemma resulting from chronic rheumatism and kindred ailments; pressure upon a nerve from cicatrices and new growths, which frequently occurs in syphilis where periosteal nodes or inflammatory changes about canals cause pressure upon nerve trunks; reflex or referred pain, especially occurring about the fifth pair of nerves, of which more will be said later on; pains in the back and in the loins and in the back of the head, which may be referred to as fatigue pains; and hyperesthesia of various sets of nerves, under which would naturally come hysteria and neurasthenia.

We may arrange the diathetic causes under a separate class, as follows: the accumulation in the perineurilemma and sheath of the various acids accompanying gout; autotoxins and poisons, as mercury, copper and lead; also cholemia, malaria, diabetes, syphilis and anemia.

We may well make a third class of causes for pain which follow and result from conditions of nerves as above outlined in the two classes, and may be arranged as follows: changes which occur more or less frequently in the blood pressure, also in the atmospheric pressure; and changes which occur in the lymph constituents and lymph pressure as well. And yet, you will notice, with all this there is no mention of cries of nerves which are directly connected with the ear, throat, nose or eye, or with any source of pain usually clearly defined and traceable to any definite and recognized local disease, such as diseased dental organs, of which more will be said later on.

Gray defines neuralgia as "functional disease of the sensory fibers of the peripheral nerves, and manifests itself by pain." As

generally used, this definition covers the meaning of the term; but if one studies more closely the various cases of pain not emanating from a specific organ or positively diseased part, it will readily be seen that the neuralgia *per se* is limited to progressively narrow fields; and that after careful investigation has been made nearly all cases of pain are better classified under other heads than that of neuralgia.

If one would study this subject in a thorough, systematic manner, he must not lose sight of lymph stasis; of auto-nerve poisons, and of the effort produced by inflammatory adhesions and by the products of, and exudates remaining after, inflammations, modifying or restricting the functioning of nerves thus hampered.

Let us now consider briefly the first cause of pain mentioned—viz., the local condition of a nerve which has suffered from inflammation and the function of which has been more or less impaired as a result. It is quite patent that an individual who has once suffered with a severe attack of neuritis constitutes within himself rather a safe index as to barometric and hydrometric conditions. And if one remembers that after a nerve has suffered from a course of inflammation, resolution rarely ever takes place perfectly, the above statement is not hard to understand. Three unnatural conditions usually follow the subsidence of the inflammatory process: a development of connective tissue in the bed of the nerve, binding it down; a development of connective tissue in the neurilemma and perineurilemma, thickening and rendering less pliable the whole envelope of the nerve: and third, and perhaps more important than the other two, a partial vaso-motor palsy and stasis in the intimate vessels of the nerve, consequent upon the general inelasticity. A nerve under these circumstances more or less thickened and possessing poor circulation, does not so readily accommodate itself to the varying swing of atmospheric pressure and moisture that it otherwise does. How well do we remember, from the study of atmospheric conditions during our boyhood days, that a man of 150 pounds is under a pressure of 30,000 pounds, or 15 pounds to the square inch—this under normal barometric conditions of our latitude. If this pressure is suddenly changed, especially if it is lessened, a normal, healthy vaso-motor center responds immediately, it increases its grip upon the muscles of the blood-vessels, and the lungs without delay hastily throw off the excess of gas, which, under the pressure of one atmos-

phere is caused to be retained in the fluids, but which pressure is now somewhat reduced. This is not the action of nerves, the function of which has been so sadly interfered with, as is the case of those mentioned above. Because of their impaired condition as to elasticity and vaso-motor control they are subjected to undue pressure—of blood and of gas—and the individual suffers acutely oftentimes before the storm breaks. Mills quotes from Mitchell and Catlin in his recent work on the nervous system and its diseases, and shows a diagram which seems to establish a close relation between pain and barometric pressure and the temperature. He says a moving space of the greatest barometric depression occupies the center of the vast area of every moving storm, known as the storm-center, and which the rain generally precedes by from 500 to 600 miles, round about which is a forerunning area of neuralgia. I have seen, and no doubt you have, more than one individual suffer these pains in the region of the face—facial neuralgia—from these causes and under these circumstances.

Healthy nerves make but a physiological note of lymph stasis and the daily fluctuations in size of the brain and various portions of the body. But these fluctuating changes in the perivascular spaces and the lymph-channels may and frequently do affect more or less seriously nerve trunks which are hampered by being bound down with products of old inflammations and with impaired vaso-motor control. There occurs an ebb and flow of lymph thrice daily, and this in connection with the diurnal ebb and flow causes a change in the size of various parts of the body, which is only a physiological change. The theory is now generally accepted as a fact that the circumference of a limb varies perceptibly during the twenty-four hours, and is smallest in the morning at the time of the lowest temperature and is largest in the afternoon and evening when the daily temperature is at its highest point. In this fact do we find an explanation of the statement that "rheumatic and gouty people, whose vaso-constrictors are more feeble and whose lymph-channels are especially prone to fill in the evening, experience difficulty in wearing articles of clothing in the evening which were comfortable in the morning." Does not the same character of reasoning explain why individuals suffer nocturnal pains occasioned by pulps of teeth that are no longer actively inflamed, but are surrounded by an area of lowered resistance, if not of actual infiltration? Until the lymph-

tide was recognized as a possible cause, the severe and somewhat mysterious ache present in Morton's metatarsalgia, which usually came on after sundown and also after a full meal, was difficult of explanation.

The third division of causes for pain—viz., the various irritating substances in the blood, being first produced in the body by imperfect tissue-metabolism—is receiving daily more and more attention as investigators are continually searching deeper into the unknown realm of digestion and assimilation outside the intestinal tract. However, sufficient has already been said to make it plain that the presence of certain substances in the blood, that are inimical to healthy nerve-life, do cause pain. It has long been known that those who suffer from gout and rheumatism are especially prone to neuralgia, and this is also true of alcoholics, syphilitics and those who suffer from intestinal fermentations; no one even attempts to deny the fact that these disorders are potent factors in causing discrasia of the blood. One common exciting cause of polyneuritis is diabetes; however, it is also true that nerve cries, which cannot be ascribed to neuritis, are caused by it. Von Noorden states that the earliest sensory disturbances to be found in diabetes are paresthesia, abnormal sensations and hyperesthesia of varying degree and location, and pain and cramps. It is also true that these neuritic symptoms appear very early, and indeed are not infrequently the first symptoms of which the individual complains, the painful areas being usually located in the trigeminal and in the crural nerves. But cases have been known in which the pains from these bodily disorders have been reflected to and manifested in the fifth pair of nerves, and on receiving proper medical aid for the bodily ailments the individual has completely recovered.

Haig, in his last edition of "Uric Acid in Causation of Disease," mentions uric acid as the cause of nearly everything from "gout to anemia, chlorosis to melancholia," and also of neuritis or of nerve pain. The fact that facial pain or odontalgia is not caused by various diseased conditions of the dental organs alone was years ago recognized by Marshall, and the same author also observed that many individuals suffering from gout would have odontalgia after having indulged in a heavy meat and champagne dinner, and this, too, when it was impossible to discover any diseased condition in the dental organs. Pope, to my mind, justly terms a combination

of alcohol, tobacco and a late dinner "a powerful trinity in the causation of neuralgia."

I fain would go on with this line of reasoning, but I trust enough has already been said to convince you, if any need convincing, that all pains of a neuralgic character manifested in various portions of the face by no means have their origin in diseased conditions of the dental organs. We must in many instances look farther for the cause of facial neuralgias. If we would practice in this connection intelligently, advisedly, we must study these various conditions and ailments, and study them thoroughly in all their bearings.

I will now consider the subject as related strictly to dentistry, also briefly stating as I understand them the principal differential diagnostic points of dental neuralgias and those of more general constitutional origin. The fact that the dental pulp does not possess the sense of touch, which is a localizing sense, renders it very difficult frequently to locate the actual seat of dental neuralgias. The pulp, like other internal organs of the body, is not intended naturally to come in contact with foreign substances from without, and is thus not supplied by the human economy with the sense of touch.

Pain from any diseased condition of the teeth is liable to be manifested in any part of the face other than the immediate vicinity of the diseased tooth; in fact, it may be set down as a rule that it will be manifested at some point more or less remote from the tooth the pulp of which is diseased, rather than be shown in the tooth itself. This will ever remain a most important factor in practice in connection with the diagnosis of facial or dental neuralgia. This is also true of the pains of hyperemic or inflamed pulps.

The pains which are manifested in the facial nerves, or the fifth pair of nerves, result from a great variety of causes. Not always by any means, as we have already learned, are they the result of diseased conditions of the pulps themselves. But as frequently perhaps, they are the result of diseased condition of other portions of the system, or of some portions of the nerve-trunk itself. This is another fact or condition which is very important, and one which must be constantly borne in mind in the endeavor to locate the cause of facial neuralgias.

The pains which are manifested in facial neuralgias are more frequent in connection with the second and third branches of the fifth pair of nerves, but are not always confined to these branches. The

first branch of this set of nerves is rather frequently found to be the seat of the pains. Whenever the pain is manifested in the first branch it is usually of systemic or constitutional causes. These may be termed occult causes, which means those that cannot be seen or hidden causes—as a diseased condition of a nerve-trunk or some adhesion binding it down in the process of recovery from an injury. Indeed, from such causes the pain is most frequently manifested in the first branch. While in connection with neuralgias arising from diseased conditions of pulps the pain is almost invariably manifested in the second and third divisions, it may occur in one or the other or in both, and is almost invariably confined to the same side of the face in which the diseased tooth occurs, but in rare instances may be manifested in the opposite side of the face; while the pains of neuralgias from occult causes, systemic or constitutional, may be manifested in any portion of these branches and on either side of the face.

Pains occasioned by dental neuralgias are by no means confined to the face. If of long standing they frequently extend down the side of the neck, being manifested in various portions of the chest, and not infrequently in the arms. The ear is also a frequent location for the manifestation of dental neuralgic pains. These pains are not necessarily constant, and most frequently are not, being of a paroxysmal character—the paroxysms being inaugurated after a hearty meal, or from taking cold and hot drinks, thus subjecting the teeth to severe thermal changes.

True dental neuralgias usually come on slowly, gradually, while in nearly all cases from systemic or constitutional causes the pains are brought on very suddenly. The pain from dental neuralgias is aggravated a great deal at night, more so than during the day, when the individual is on his feet and moving actively about; at night he assumes the recumbent position and the pressure of the blood throughout the face and various other portions of the head excites the paroxysms of pain; while the pains in connection with systemic causes may be constant during the day as well as the night, and especially is this true if the pains are being manifested in some part other than the head. If the pains from constitutional causes are being manifested in the region of the head, they also will be more severe as a rule upon the patient assuming the recumbent position.

A difference of much importance in connection with the differential diagnosis of pains manifested from causes occult and those of dental neuralgias is this: the pains of neuralgias from the former causes are almost invariably manifested in the surface of the skin, the latter being exceedingly tender because of the diseased condition of the nerves, the slightest pressure upon its surface causing severe pain. In connection with neuralgias which are purely dental this is rarely ever true. The pains at various parts about the face or gums are seldom manifested in the surface, but are almost invariably deep-seated—being manifested deeply within the parts. Occasionally a tenderness will be manifested in the surface of the mucous membrane in dental neuralgias, especially opposite the inferior dental foramen where the nerve passes out of the body of the bone; and also occasionally about the region of the infraorbital foramen—but these are of rare occurrence.

Individuals of the neurasthenic diathesis are especially subject to neuralgia. Many individuals are seemingly born with this diathesis—liability to diseased conditions of the nerves throughout the system. However, this condition may be acquired later on in life. Anemic individuals are especially liable to neuralgias, not only dental, but almost any form of systemic origin. And those living in malarial districts are especially liable to neuralgias of various characters.

With this consideration of neuralgias in general and these differential diagnostic points between general neuralgias and dental neuralgias, let us consider briefly some of the most common causes of dental neuralgias. And first let us never lose sight of the fact that at the best the causes of facial neuralgias are not well understood; also that the number of cases of true neuralgias that develop from diseased dental organs is comparatively small; and that patients not infrequently suffer neuralgic pains for weeks and months, yet one is unable to locate the cause, or to ascribe any reason for their continuance.

Inflamed pulps are a frequent source of continued or recurrent reflected pains, the nature and characteristics of which make it proper to refer to them as neuralgic, as the term is ordinarily used. Calcification of the pulp, in any of its various forms, frequently induces pains which are as properly termed neuralgic. Another cause of reflected pains, referred to as neuralgic, is imperfect root-

canal fillings. Not infrequently a small portion of the root-canal at the apex is not perfectly filled; moisture and other necessary elements accumulate and degenerate, gases form, in consequence of which pressure is exerted on the soft tissue in the apical space, the nerve filaments are thus disturbed and the result is reflected pain, oftentimes of a severe character—neuralgia, as we all call it. Another cause of reflected pain—neuralgia—sometimes in its most aggravated form, is mechanical abrasion of the teeth. How often is observed a wasting of especially the anterior teeth by this process nearly to the gum line. Cases of this character have come under my observation in which it was necessary to devitalize the pulps of the anterior teeth of each jaw before a cessation of pain was effected. In such cases, where pain is occasioned by diseased pulps, it will not always cease immediately upon devitalization. I have known the pain in cases of long standing to continue more or less severe for several days, gradually abating after a removal of the pulps. Not infrequently a lifting away from roots of the teeth of the peridental membrane by the burrowing of pus or the formation of phagedenic pockets, the absorption of the alveolar plates of bone, or by spiculæ of bone remaining and constantly irritating the edges of the peridental membrane, severe pains, taking on all the characteristics of those of true neuralgia, have been known to result. Excementosis of the roots of teeth is not an infrequent cause of neuralgic pains more or less severe. Last, but not least, malposition of the teeth, especially of the third molars, has been known to cause neuralgic pains of the most aggravated form. The occlusal surfaces of these teeth sometimes rest against the distal surfaces of the second molars, or the position of the teeth may be normal, the angle of the jaw being too short to accommodate them, so that the parts about are severely crowded: the nerve-trunks are thus subjected to constant irritation, resulting in severe pains.—*Western Journal, July, 1899.*

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TWO CASES OF CYSTS OF THE JAW. By Thos. L. Gilmer, M.D., D.D.S., Chicago. Read before the Odontographic Society of Chicago. Cysts of the jaw are sufficiently rare to justify me in presenting two cases which I have recently had in my practice, both of which were demonstrated by skiagraphs. Case No. 1. The patient is a man thirty-one years of age, a cabinetmaker. Four or five years previous to his first visit to my clinic he reports that he

had a swelling in the region of the third molar, which it was supposed was caused by its being partially erupted. This was extracted and afforded temporary relief. In less than a year he had a recurrence of the swelling which would periodically return and subside, pain always accompanying the swelling. A few months ago he applied to Dr. Frankel, who found the first molar quite loose, which he extracted, with temporary benefit. When I first saw the case there was thickening of the jaw from the second bicuspid to the angle, with a slight redness of the overlying soft tissues. I made an incision into the thickened portion of the jaw for exploration and found a small quantity of a straw-colored fluid, the flow of which was followed by blood. On probing, I discovered a cystic condition of the jaw extending back on either side of the second molar toward the angle. The second molar was quite loose. This was extracted and was followed by a profuse arterial hemorrhage. The appearances indicated a dentigerous cyst, or a sarcoma, or both. I had two skiagraphs of the jaw made. In one the film was exposed in the mouth, the light being applied below the jaw; the other exposed the jaw from the side.

Neither of these pictures gave evidence of unerupted teeth in the posterior portion of the jaw, but clearly outlined the cyst. The picture made by exposing the film in the mouth showed plainly buried deeply in the jaw below the deciduous cuspid, which had not been shed, the permanent cuspid. It showed also a small canal on the lingual side of the bicuspid, connecting the cuspid with the main cyst.

I extracted the first bicuspid and temporary cuspid above the buried tooth and cut away the bone underlying and found the tooth, and also found that I could pass a probe from it to the cyst through the canal. I cut away with bur a considerable portion of the bone about the cuspid and attempted its removal with forceps, but it was so firmly imbedded in the body of the bone that I dared not apply sufficient force for its dislodgement. I prevented granulations covering the exposed tooth by keeping the opening packed with gauze. Upon opening into the bone in the posterior portion of the jaw I found a multilocular cyst, with here and there necrosed bone. I cut away the bony partitions and frequently irrigated the parts with an antiseptic solution, packing the opening with iodoform gauze. This was continued for a number of weeks. At present

the case is very much improved, though the opening in the bone made by the destruction of the cell walls and the removal of necrosed bone has not fully filled up. It is slowly filling, however.

There may be a doubt entertained as to whether the cyst in the posterior part of the jaw was caused by the buried cuspid. It was certainly a cyst and of the multilocular variety. I am of the opinion that it had its origin in the capsule of the buried cuspid tooth, as there was positive evidence of direct communication on the lingual surface of the jaw between the cuspid and the cystic condition in the posterior portion of the jaw.

Case No. 2. Henry F., aged fourteen, German, was admitted to St. Luke's Hospital, December, 1898. For six months before entering he had suffered from what he calls "a swelling on his upper jaw," extending from the second bicuspid to the tuberosity. This gradually increased in size until two months before entering the hospital an opening occurred, and through it were discharged several hard, irregular bodies, one of which resembled a normal tooth. The patient believes that about four of these bodies were either discharged or removed, one requiring the assistance of a dentist, the others being removed by the thumb and fingers. He has experienced some pain in the jaw occasionally, usually preceding the attempt at a discharge of the bodies. This pain, he thinks, was very similar to toothache from a badly decayed tooth, which causes "the jaw to swell." No history of severe illness, aside from the usual childhood diseases, is obtainable. History of injury does not obtain. The family history shows nothing that might be interpreted as hereditary in his case. Both father and mother are living, and no irregularities in the teeth as to form or development occurred. The same may be said of the brother and sister older than he.

On physical examination of the oral cavity and face the first thing which attracts notice is the slight prominence of superior maxilla beneath the left eye. The eye itself is not encroached upon by swelling, and pressure elicits no pain. In the roof of the mouth but slight irregularity occurs, only a trifle of enlargement of the alveolar process opposite of the second bicuspid and first and second molars, but on the buccal side of the above mentioned teeth there is a distention of the outer wall of the alveolar process at least one-half an inch. Posterior and buccally to the second molar there is a small opening in the gum through which the bodies above referred

to were discharged. Through this opening hard, smooth bodies may be distinctly felt with the probe. To the palpating finger is imparted the sensation of hard and immovable bodies. The size of the growth not possible to entirely outline by palpation, on account of its situation. The erupted normal teeth in the jaw show no special irregularity in position or development, but each is loosened by partial absorption of the process caused by pressure of the growth.

Operation: Patient was chloroformed by Dr. Curry, small amount required, and was well tolerated throughout the entire operation. The second bicuspid and the two molars overlying the cyst were extracted in order to uncover the tumor. The gum was dissected up from the buccal aspect of the tumor and the overlying process removed. With the aid of a dull curet large numbers of anomalous teeth varying in size were removed. The size of the cyst was found to correspond to that of the antrum of Highmore, entirely obliterating that sinus; the prominence of the face being due to the pressure forward and laterally upon the outer wall of the antrum. The entire number of malformed teeth removed by curet was seventy-eight. The cyst wall was thoroughly curetted away, the cavity irrigated with boric solution and packed with iodoform gauze. Two silk ligatures were placed through the gum tissue for the purpose of helping to retain the gauze in place. This might be designated, in contradistinction to cysts containing one tooth, a multiple dentigerous cyst. This cyst contained far more teeth than any other cyst of the jaw of which I have been able to find a report. Tomes reports one case in which there were twenty-six dwarfed teeth. Salter one in which there were twenty-eight more or less dwarfed. Dr. Swain reported a very interesting case to the American Dental Association in 1875, in which there were sixteen dwarfed cuspid teeth removed from one cyst. These were perfectly formed teeth but diminutive in size. He presented photo-micrographs at that early day, superior to many made now, of the histological appearance of the teeth.

In case No. 2, as well as in case No. 1, I employed the skiagraph as an aid to diagnosis, though I had no doubt as to the true condition from the history and physical appearance, but employed it to familiarize myself with the abnormal conditions, as shown by the X-ray in such cases, as an aid in differential diagnosis, when the indications are less pronounced.

Exsections of jaws have been made, the physical appearance and history in the case indicating malignant affections, when too late it has been discovered that the disease was the result of a buried tooth, which had caused a cystic condition of the jaw, and that a much less heroic operation which would have left the jaw intact would have been sufficient. In all cases where there is the least doubt it is best to employ the X-ray and determine positively if there be present a buried tooth, which may be the cause.

It is not difficult to suppose that the capsule enclosing a buried tooth, whether of the normal or supernumerary set, if from some cause it cannot be erupted, may from irritation be transformed into a cyst wall and the conditions observed which are found in a dentigerous cyst, but there are other problems in connection with dentigerous cysts which are less easily accounted for.

The development of supernumerary teeth in the jaws appears less irrational than the development of teeth in other parts of the body, in the ovaries for instance. However, we have no definite knowledge of their exact source, nor do we know why we have in some instances perfectly formed teeth, usually of the cuspid type, and in others nests of malformed teeth composed almost wholly of dentin. Kollman and Magitot concluded that supernumerary teeth are developed from the remains of the epithelial cord after it has been separated from the follicle. They were of the opinion that there was in some instances sufficient fecundating influence remaining in these portions of the cord to cause the embryonical tissue to attempt tooth formation. I feel inclined to believe that this theory is correct if applied to these nests of malformed teeth, but it does not seem to me that it accounts for the perfectly formed supernumerary teeth.

Dr. Black has found in some instances that the buds which form the permanent anterior teeth are not always given off from offshoots from the cords of the temporary teeth, which is the rule, but that occasionally they are given off directly from the epithelial lamina. This being true, may not the more perfectly formed supernumerary teeth be a result of an additional or double budding direct from the lamina, or an extra bud from the cord which is to form the permanent tooth, and the malformed teeth a result of an effort at further stimulation of the indifferent tissue by the several parts of the partially atrophied cord which has lost its fecundating influence in too great a degree to form fully developed teeth, but retains sufficient

vigor to cause the development of malformed teeth? We find that these teeth or bodies are principally composed of dentin, with perhaps but a trace only of enamel, which must be present, as we cannot presuppose that the enamel organ, while capable of stimulating the formation of dentin is not capable of a deposit of enamel. Indeed we must always conclude, even if enamel is not visible microscopically, that it must exist, however small in quantity, in connection with some part of the dentin formation, or if not found, that it has been accidentally removed.—*Review, June, 1899.*

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RELATION OF DISEASES OF THE TEETH TO THE CHRONIC SWELLINGS OF LYMPHATIC GLANDS. By Dr. H. Korner Halle of Berlin. The title indicates that the author has tried to show how through a bad tooth injurious matter may get into the lymphatic system. The most important question to settle was whether a so-called "dead tooth" only can serve as an entrance way, or also teeth with an inflamed pulp. The author by experimenting on dogs' teeth has succeeded in proving the latter. The pulp of a narcotized dog was laid bare, some Prussian blue painted on, and the cavity closed with cement. After two to three days the dog was killed, and the pulp of the tooth as well as the sub-maxillary glands examined with a microscope. Some particles of the Prussian blue were found dispersed through the whole pulp up to the apex of the root, and also in the lymphatic glands, although in very small quantities.

How to explain this capability of absorption of the pulp is a further chapter of the work. It is a fact that in most researches lymphatic vessels in the pulp could not be discovered microscopically, therefore the author has tried to determine by Gerota's method, by means of an injection of Prussian blue into the tissues of the pulp, whether there existed embryonal absorbing combs—in other words, lymphatic crevices, lymphatic capillaries, or lymphatic vessels in the pulp. The experiments were made on freshly-extracted human teeth and on calves' teeth. A whole net of vessels and capillary veins could be seen, but they were proved to be exclusively blood-vessels. The result of these experiments was, "that there were no embryonal lymphatic vessels or spaces in the living pulp."

But if the first experiment still showed an absorption on behalf of the pulp which even extended to solid matter, this absorption does

not take place in a regularly formed lymph path, but it is evidently done by the intercellular stream of liquids in the tissue, probably even simply by wandering cells which absorb the color and carry it. If once the absorbed matter gets beyond apex of roots, there is no more obstacle in the way of its carriage to the lymphatic gland.

Apart from these experimental investigations the author has also tried to prove clinically that "dead teeth" as well as "living" defective teeth may cause swellings of the lymphatic glands. He has examined about 4,000 children, a far greater number than any of the earlier fellow-workers has reached. To avoid the mistakes made in any of the earlier statistical researches, the author has prepared statistical tables, which exactly indicate how many deciduous and permanent teeth every child had, how many teeth had recently been taken out, also the spot of defect in every bad tooth and the degree of it. The condition of the gum of every child, as well as those local or general illnesses which cause swelling of the glands, were likewise taken into consideration, in order to exclude such cases in the estimation of swellings of glands caused by illnesses of teeth.

The author, after closely studying the source of every single gland, was quite convinced that the upper teeth have no connection with the submaxillary glands, because the lymphatic vessels appertaining to them empty themselves into glands which are externally not perceptible, and he has arranged two different tables. To the first belong the teeth of both jaws, in order to compare the results with those of former researches; to the second—the more correct one—belong the dead teeth and those having an injured pulp of the lower jaw, whilst the teeth in the same condition in the upper jaw are not taken into account; a third table enumerates only the cases of swellings of the glands in proportion to teeth with an affected pulp.

The children are divided into three groups: The first group comprises 319 children who had no swelling of glands at all; 236 (74 per cent) had no bad teeth which might have caused any swelling of the glands; 80 (26 per cent) had such bad teeth. The second group comprises children who had swellings of the glands in different degrees, but there were no other causes besides bad teeth, consequently these children cannot be counted in the statistics. 3,161 children are left for the third group, who had swellings of the submaxillary glands in different degrees, for which no other causes could be found except those arising from bad teeth.

At the tabular total of this third group the proportions of the numbers were as follows: Among 3,161 children with swellings of the glands were 2,334 (or 78.8 per cent) who had bad teeth of the third or fourth degree in the lower jaw. With 1,646 (or 70 per cent) of these children the bad teeth, with regard to their position, intensity of illness, etc., corresponded exactly to the position and the degree of the swelling of the glands; with 688 (or 29.5 per cent) the bad teeth and glands did not agree, or partly only. The third table proves that more than half of all the teeth made responsible for any swelling of the glands had still a living pulp.

The author states the summary of the result of his work as follows: 1. Bad teeth—carious ones especially—play an important part as etiological factors in swellings of those lymphatic glands in the regions of which the teeth are situated. 2. As long as the caries is limited to the enamel and dentin of the tooth, without influencing the pulp, there is no swelling of the gland to be feared. 3. If the pulp is deprived of its epithelial protection, which consists of the enamel and dentin of the tooth, there is the possibility of a swelling of the lymphatic gland through the medium of infectious or otherwise injurious matter. 4. Not only bad teeth with open cavity and root-canals must be considered the entrance way for infectious matter, but also the teeth the pulp of which is still alive, if exposed to the injurious influence of outer contact. 5. There are no lymphatic capillaries and no lymphatic vessels existing in the pulp, and yet the pulp possesses the capability of absorption.

* * *

IMMEDIATE REGULATION. By Dr. A. F. James, Oak Park, Ill. Read before Chicago Dental Society. In cases of orthodontia no doubt the majority of you have felt as I have the need of some method by which the painful and long drawn out process of bringing the teeth into their proper position might be abridged. A partial solution of this problem, I believe, lies in immediate regulation by surgical procedure. Certainly all cases are not amenable to this treatment, but in many instances a single malposed tooth standing inside the arch can be brought into perfect alignment by this method at a great saving of time and patience to both operator and patient. It is needless to dwell upon the trials attending even a single case of regulating with appliances.

In selecting the cases for immediate regulation the operator must

be governed by the age of the patient, by the space that exists, or that can be gained before operating, and by the change of position or angle to which the tooth can be moved without changing the position of the apical end of the root. These limitations you will observe confine us to the anterior teeth. Taking for example a malposed superior lateral incisor standing inside the arch, my method of procedure would be to first use as an anesthetic either gas or some local application. After gaining the effect of the anesthesia I would use a three-quarter inch disk steel saw mounted on a mandrel in the engine, and cut a deep incision through the gum and process on each side of the tooth (mesially and distally), extending the incision as far toward the apex as possible. Then place a block of hard wood so that it will rest upon the teeth on either side of the tooth being operated upon, the block cut out so as to allow the tooth to be moved forward into line with the others; then take a pair of narrow-beaked incisor forceps, place one beak upon the block of wood (held in position with the left hand) and the other on the lingual side of the tooth to be moved. Force the forceps well up on the tooth, then with a gradual, steady pressure force the tooth forward, carrying with it the block of process and gum tissue attached to the labial side of the root until the tooth is in the desired position; you are then ready for the retaining appliance. Use either ligatures, tying the tooth solidly to the central and cuspid, or if something more firm seems advisable, fit gold bands to the incisor and cuspid with an open tube soldered to them so that a stiff piece of piano wire may be placed in the tubes and secured by pinching tightly with a pair of flat-nosed pliers. Then tie a ligature firmly about the lateral incisor and fasten it to the wire, keeping the retaining appliance in place until the tooth becomes solid.

The patient should be seen every second day and the parts thoroughly cleansed until the gum tissue has healed. In my opinion this operation can be successfully accomplished in any case without fear of destroying the pulp, providing the patient is under twenty years of age, the apical opening of the root being large enough to permit of more or less stretching or straining of the pulp without breaking it loose from the surrounding tissues, or causing inflammation sufficient to destroy the pulp. In an adult, as you know, the pulp-canal is small and the apical attachment so small that we run a greater chance of destroying the pulp, although out of a number of cases

in my own practice where I have operated for adults I have caused the destruction of but one pulp. My reason for operating for adults in several cases has been because of a tendency or even advanced stages of pyorrhea alveolaris resulting from the patient's being unable to properly cleanse the parts and to keep the gums hard and firm around the necks of the teeth. In each case where I have had this condition, the result of placing the tooth in position where it will receive the proper amount of care I have found a complete cure for the pyorrhea.

I may have made it seem that this operation is so greatly limited that it is of no consequence; but my idea has been to simply bring out the successfulness of the operation, and allow individual judgment to decide when it is applicable.

Those of you who attended the World's Columbian Dental Congress will remember the paper read by Dr. Geo. Cunningham of England. It made a fixed impression upon my mind and this impression grew as from time to time I came in contact with vexing cases of irregular teeth. But although I give Dr. Cunningham credit for the ideas I have on the subject, I must say that his article does not encourage one to try the operation. He held that the apex of the tooth could be freely moved and that it was preferable to perform the operation for adults. My opinion and experience differ from his upon those two points.—*Review, June, 1899.*

* * *

MAN.—Man born of woman is of few days and full of microbes.

He cometh forth like a flower, but is soon wilted by the winds of adversity and scorched by the flames of perplexity.

Sorrow and headache follow him all the days of his life.

He hoppeth from his bed in the morning and his foot is pierced by the cruel tack of disappointment.

He ploddeth forth to his daily toil and his cuticle is punctured by the malignant nettles of exhaustion.

He sitteth himself down to rest at noonday, and is lacerated in his nether anatomy by the pin of disaster.

He walketh through the streets of the city in the pride and glory of his manhood, and slippeth on the banana peel of misfortune and unjointeth his neck.

He smoketh the cigar of contentment, but lo! it explodeth with a loud noise, for it was loaded.

Behold he glideth down the banister of life and findeth it strewn with splinters of torture.

He is stung by the mosquitoes of annoyance by day and his frame is gnawed by the bedbugs of affliction by night.

What is man but the blind worm of fate? Seeing that his days are numbered by cycles of pain and his years by seasons of mourning.

Behold he is impaled upon the hook of desolation, and is swallowed up by death in the fathomless ocean of time and is remembered no more.

In his infancy he runneth over with worms and colic, and in his old age he groaneth with rheumatism and ingrowing toe-nails.

He marryeth a cross-eyed woman because her father hath a bank account, and findeth that she is ridden with hysteria and believeth in witches.

His father-in-law then monkeyeth with stocks and goeth under.

What is man but a carbuncle on the neck of existence? Yea, but a tumor on the back of fate.

He playeth at the races and staketh his substance on the brown mare because he hath received a tip. The sorrel gelding with a bald face winneth by a neck.

Behold he runneth for office and the deadbeat pulleth him ever and anon and then voteth against him.

He exalteth himself among the people and swelleth with pride, but when the votes are counted he findeth that he was not in it.

He boasteth of his strength in Israel, but is beaten by a bald-headed man from Taller Creek.

He goeth to the postoffice to glance at the latest papers, and receiveth a dun from the doctor for his last year's attentions.

He goeth forth to breathe the fresh air and to meditate on the treachery of all earthly things, and is accosted by a bank cashier with a sight draft for \$127.39.

A political enemy lieth in wait for him at the market place and walketh around him crowing like unto a cock.

He trusteth in a man who claimeth to be filled with righteousness and standeth high in the synagogue, and gets done up.

For behold his pious friend is full of guile and runneth over with deception.

From the cradle to the grave man giveth his alms to him that smiteth him.

His seed multiplyeth around him and cryeth for bread, and if his sons come to honor he knoweth it not.

Fate prevaieth ever against him.

What is man but a painful wart on the heel of time.—*John Collins, M.D., in Medical Brief.*

Letters.

BALTIMORE LETTER.

Dear Digest:

BALTIMORE, Aug. 19, 1899.

"Ride with an idle whip, ride with an unused heel,
But once in a way, there will come a day
When the colt must be taught to feel
The lash that falls, and the curb that galls,
And the sting of the rowelled steel."

The day of which Kipling speaks has come. The idling, lagging in the stretch, frolicking and fun-making are at an end, and sober, serious business is before us. Need we ask ourselves if the outing, the relaxation, the lapses, were profitable? Possibly not, if idle words and foolish pranks are to be severely judged. The brevity of human life, coupled with the seriousness of our obligations, and the crowded condition of our hours of work, prepare us when the time comes with a sharp, school-boy appetite for the frolic and fun of the play-ground. The youngsters will outgrow this; for the "dull boy, Jack," was yet a boy. Nobody ever heard of work hurting a man.

How pleasant it was this year to greet so many of our friends, who, separated often by great distances, yet make us feel at home and happy by their cordial greetings and fond ways that we have learned to love so much. Is this a factor in professional advancement? We think so, for it at least goes far to make our annual meetings attractive, and it insures a large attendance.

To the president of the National a very great deal of credit is certainly due. First, his efforts were responsible for the meeting at Niagara of the National Association of Dental Examiners; and the harmonious relations established between this body and the National Association of Dental Faculties will do much to foster quiet but sure progress in dental education. The unrest, bickerings and lawsuits of last year exercised no beneficial influence whatever.

The placable disposition of the examiners was very commendable, and their attention to a matter which has been pointed out frequently in these letters as a legitimate field for activity, viz., the unification of dental laws, was encouraging. The foreign visitors to a man said that if the states of our country would adopt a uniform standard, European countries would gradually follow suit, and our

standard would be recognized unquestionably abroad. It is a pleasant augury that these gentlemen who came from afar were so much pleased with their reception. One of them—Dr. Mitchell of London—has been spending some days with us in Baltimore, and has given us much pleasure and enjoyment by his kindly manners and goodfellowship.

There seems to be every prospect that a large number will avail themselves of an opportunity next year to renew their acquaintances in Paris. The next meeting of the National we think should be changed to the first or second week in July, so we could make a continuous trip by sea to New York, and there take steamer for Paris.

Our state society held a meeting recently and elected Dr. Cruzen president. The Doctor has taken hold of the reins with a will, and has called a meeting of the officers for this week. We suggest that if we have a union meeting this year it may be early in April, so as to get out of the way of the National. The fact that the colleges are still in session need not affect the arrangements, for generally speaking the college men have not been very constant in their attendance anyhow. Somewhat depends upon our Virginia associates; they may not care to meet with us this year, as the National meets in their territory.

We shall have a local meeting in October; an afternoon of clinics and some papers at night. We predict renewed interest in our society, and are sure the new officers will work to improve professional matters hereabouts.

Much apprehension has been experienced about the International Crown Tooth Company suits. We hope our dentists will to a man step up to the captain's office and square themselves with the Protective Association. Let no false modesty keep them away; they were wrong in not attending to this before, but "better late than never." Oriole will do his part to help. Cordially, ORIOLE.

NEW YORK LETTER.

NEW YORK, Aug. 23, 1899.

To the Editor of The Digest,

MR. EDITOR:—Now that Dr. Stewart is on record in the July *Cosmos*, we can study his theories in connection with the clinics he gave here recently. His idea leads us to look for the exciting cause

from a disordered condition manifestly expressed in the pericementum, causing an obliteration of the lacunae and canaliculi, and producing a dense and flint-like structure of this membrane. He leads up to a conclusion—not as we have been thinking—that the trouble has its origin in various other exciting causes. Dr. Stewart emphasizes what is already in the mind of others, that this disturbance may get its first manifestation directly from causes that produce an irritation from within the pulp sac or nerve tissue. At any rate something occurs within the sac that awakens an uneasiness which is communicated to the apical portion of the tooth, and there, as Dr. Nash claims, the first manifestations of pain are expressed, although they may be but faintly apparent. He further believes that from all cases which have a manifestation at the gum line there can be traced a sinus or interstitial tract.

Dr. Bodecker found in his investigations of the anatomy of the pulp that but a small number, about 3 per cent, was in a healthy condition. This shows at once that here is a large field for pathological antics, some of which we know—pulp-stones, for instance.

We would correct Dr. Stewart's statement regarding Dr. Riggs' use of acids, for he used no medications in the pockets after the surgical treatment, which was by instrumentation alone. Dr. Stewart emphasizes his method as differing from the general thought, but we cannot commend it, as he advocates separating the gum tissue entirely around the root of the tooth. We think it radically wrong to encroach so much upon tissues that cannot be involved. Good surgeons cut only to just beyond the life-line, which is sufficient to secure a healthy reaction.

This controversy regarding dental legislation is interesting, but what a ridiculous position our profession occupies before the public, when it is openly admitted that there is no legality before the courts. While we think Dr. Crouse's editorial in the last issue to be unusually able, we do not agree with the thought that our calling is overcrowded with ability. It is, however, surfeited with inability. To the practical department of dental schools must be laid the serious charge that they allow so large a percentage of inefficient students to be passed, and here is the main fault. Those in charge of this department must know whether or not a student manifests a possibility of becoming a suitable practitioner to send out to claim support from the public.

Petros Bedneyeff, an Armenian merchant, arrived in New York some days ago, having come all the way from his native land to have American dentists make a new set of teeth for him. He had sent all over the world for samples and was most pleased with those from America. An Armenian artist sent an elevation of Bedneyeff's mouth with specifications as to what teeth were needed, and the American dentist who had been chosen for the work promised to have the set ready when he arrived!

Dr. Wm. T. Shannon died recently. He has been a familiar figure in Brooklyn for many years, and had a large practice. Dr. Farrar and others got their start in Brooklyn in association with him. He was a man of extreme sociability and several of the older dentists had a standing invitation to dine with him at any time.

We notice a reference to absorption areas in the July DIGEST, and it is shown that calcific action is a frequent condition of the pulp. This is worthy of attention, since light seems to be coming along that line. It may prove a factor in the treatment of pyorrhea, or as it is most recently termed, "Alveolar Arthritis." What next?

Dr. S. G. Perry and several others have left this country for the present in search of fresh air, and we notice that quite a number are here from the other side, perhaps for the same purpose. The new National Association seems to insure a favorable feeling for larger intercourse with our neighbors across the water.

We notice that Gutmon Blanco has recently died in Paris. He was reputed to be one of the richest men in the world, and it was against him that the late Dr. Atkinson had a bill for \$7,000. It was justly due, but after waiting two years he was forced to compromise for \$1,200. Why?

We do not read many books nowadays, but we have just started one, and if the finish is half so good as the first part it is well worth reading. If anyone is a little out of humor because of the hot weather, overwork, dull times, or any cause, we suggest that he buy or borrow "David Harum." We learn that the author was a son of the late Dr. Amos Westcott, a prominent dentist of Syracuse in the early days.

Cordially,

NEW YORK.

STRENGTH.—Man is said to be the strongest in his thirtieth and thirty-first years.

CHICAGO HEALTHY.—The average age of those who died here in 1872 was a little over fifteen years, while in 1898 it was over twenty-nine years.

The Dental Digest.

PUBLISHED THE TWENTIETH DAY OF EVERY MONTH

At 2231 Prairie Avenue, Chicago,
Where All Communications Should be Addressed.

Editorial.

THE MEETINGS AT NIAGARA.

The recent meeting of the National Dental Association, considered from all standpoints, must be regarded as one of the most important events in the history of dentistry in this country. In point of numbers in attendance it has never been equalled, except at the World's Columbian Dental Congress, which had the attraction of the great World's Fair to swell the convention.

The literary program we should say has never been surpassed, and—a pleasing contrast to the meeting last year at Omaha—much good matter had to be laid over until next year because there was not sufficient time to consider it. In this connection we would make one criticism, namely, that the program was too long and the papers read were therefore not thoroughly discussed. Such a state of affairs is possible because the sections have not fully realized what is expected of them. In fact, as yet the section work has been so imperfectly done that it does not become sufficiently useful to or hardly a part of the main body.

The amendment offered last year, which gave the miscellaneous business not otherwise provided for to an executive council, was adopted at this meeting and will probably result in better work. This reform should go further, and the chief officer should be selected by this council, perhaps in conjunction with the executive committee. It would be possible for the council to choose the right man, and we are sorry to say that this is too often not done in open meeting. This individual should be selected simply and solely because of his ability to conduct the meeting successfully, and not be elected merely as an honor or as a reward for some useful service in other directions, and without any regard for his fitness. The presiding officer in many cases makes or mars the meeting, and this last gathering is a good illustration of our proposition. Dr. Burkhardt is not only a first-class presiding officer, but he is a worker

as well and did much toward securing a good literary program. The presiding officer chosen for next year, Dr. B. Holly Smith, is a most capable man in this direction, and the National is very fortunate in having two such good presidents in succession.

The lack of a proper place in which to hold the meetings was one great drawback. The room would have been large enough for ordinary meetings, but the unprecedented attendance this year was too much for its capacity. This feature of the meetings will be an important consideration in choosing the place of meeting hereafter, if the association grows as we have every reason to believe it will.

The number of exhibitors was the largest ever present, and their exhibits were of superior quality and showed an advancement over previous years. Those in charge of the exhibits, however, subjected themselves to the criticism of being a detriment to the meetings in many ways. They rented their space direct from the hotel and therefore did not feel under any obligation to the National Association, and so when they were requested to close up during the sessions they failed to do so in many instances. To have exhibits open during the sessions, calling the members away from the meeting and creating noise and disturbance in the corridors and rooms adjoining the meeting hall, is a source of great annoyance and harm to a scientific body. Unless exhibitors are willing to comply with the requests of the National Dental Association we should certainly recommend that no exhibits be held in conjunction with these meetings.

An event worthy of highest commendation, if the two bodies can only live up to their present agreement, is the understanding which has been effected between the Faculties' and Examiners' Associations. We have been urging this in the *DIGEST* for several months past, and feel much gratified at the result. Full details of the present relations existing between these two bodies will be found in the transactions of the National Association of Dental Faculties published in this issue.

CROWN COMPANY AGAIN IN OPERATION.

The profession are probably aware of the recent decision in favor of the Crown Company in New York, for the daily newspapers of this country have given wide publicity to the affair. As these reports are full of inaccuracies, and as we are overwhelmed with

inquiries from all over the country, we think it well to give a brief synopsis of the whole question so that our readers may know what to expect.

To begin with, the International Tooth Crown Company had originally secured a decision by the highest court in the southern district of New York, declaring some of the various patents on crowns and bridges valid. With these decisions in their favor, as you may remember, eleven years ago they started through the country securing licenses and collecting royalty, the terms imposed being twenty-five dollars (\$25) per year license fee and fifteen per cent (15 %) on all work done. Those signing a license agreed thereby to the validity of some thirty-eight different patents which the Crown Company had secured on various devices.

At this stage of the proceedings the Dental Protective Association was organized and within six weeks it had stopped the Crown Company from enforcing their patent claims. The Association drove them from one court to another, they withdrawing and paying costs rather than make a test case, until they reached the Federal district in which they had previously obtained their favorable decision. It was here in 1896 that the Association succeeded in having the former decision of these courts reversed and the Low bridge patent declared invalid; first before the Federal judge in the Circuit Court, and afterward in the United States Court of Appeals. This supposedly to all intents and purposes ended the litigation with the Crown Company. It did not, however, for they reorganized and secured in their company individuals of large means, and their efforts were exerted to get a reversal of our decision, on the ground that they had had a favorable decision on their patents at one time, and at the second contest they had been reversed, and so they were entitled to a third hearing. We have known all this and have urged repeatedly that this action was being taken by the Crown Company; and we predicted that just the results that have taken place would transpire, namely, that the Crown Company would get a decision in their favor because there was no adequate defense being made. Bear in mind, the defendant was a relative of persons connected with the Crown Company and not a member of our Association; therefore *the Protective Association has not been represented in any way in the recent suit.*

The Crown Company have their decision, rendered by Judge

Townsend July 31, and it practically overrules or reverses the former one which declared the patent invalid. With this to back them they are already actively at work. So far as we can learn they are confining their operations at present to the state of New York. Letters have been written by the Crown Company's attorneys to dentists in New York state, urging them to settle at once if they wish to avoid trouble; legal action has been instituted, and a thorough canvass is being made of the whole state, all towns being visited. Last week in Auburn they induced every dentist to contribute much more than it would have cost him to join the Protective Association; and according to the *Syracuse Herald*, on August 18 they extorted \$1,000 from the seven dentists in the town of Geneva. Many other instances might be cited, but enough has been said to show the gravity of the situation. We have no doubt that the Crown Company will intimidate the dental profession who are not members of the Protective Association into paying them several million dollars, and the question on the lips of every one is, why is such a condition possible?

There is only one answer. We do not say that the dental trust is financially interested in the Crown Company, but it sees the menace to its methods in having the dentists banded together. For this reason it is ready to welcome any movement which will check the work of the Protective Association. The agents of the supply houses controlled by the combination have therefore belittled and slandered the Association and its work whenever an opportunity was presented. The most vicious and false statements have also been circulated about the chairman of the Protective Association, and his every act and motive have been impugned. The books and accounts of the Association have been examined twice each year by different committees composed of the most representative men in the dental profession, at the request of the chairman, and such committees have invariably reported that the accounts were absolutely correct, the affairs wisely and properly managed, and that the chairman had never received one dollar of compensation either directly or indirectly. Not content with slandering him, the trust has had the unblushing effrontery to insult these eminent men, by declaring that the funds of the Association have been diverted from their proper channel and that the whole business has been mismanaged.

This unlawful combination has an army of agents, and by per-

sistent and concerted action it has so prejudiced the minds of the dentists against the Protective Association that they have grown either hostile or apathetic, and so have been unwilling to join with us. A less numerous though more dangerous set of men controlled by the trust are those individuals, frequently of some prominence in the profession, who are either openly hired by this combine or else work in its interests because of some financial obligation. This includes the deans, managers and teachers of a few colleges which we might mention, and what is even more unfortunate, the editors of nearly all the dental journals in this country. These publications cannot be independent nor can their editors say what they know to be the truth, as has been clearly illustrated in the past by their never giving the Association the support which it deserved.

The Crown Company resumed operations because they thought the Protective Association to be no longer active, and they were led to this belief by the apathy of the dentists, but more especially by the recommendation of these same enemies of the profession, who urged that the Association be disbanded.

Having placed the responsibility for the present state of affairs where it properly belongs, the question arises, what will now be the attitude of these hitherto hostile agencies? In the face of the extortion already being practiced by the Crown Company upon the deluded members of our profession, will these same enemies of justice continue to advise the dentists not to join with us—in spite of the fact that the Association has never lost a suit; has never allowed royalty to be collected from any member; has made it impossible for patent sharks of any description to prey upon the profession, and most important of all, stands ready and able at this time to protect all its members from any claims of royalty by the Crown Company. We had hoped that this powerful combination through its journals and numerous agents would throw its influence on the side of the profession, and urge the dentists to join the Association immediately. This would be the least they could do to atone for the wrong they have done the profession.

It may be reasonably expected, however, that the same opposition and misrepresentation as heretofore will be manifested, as the *Dental Review*, the only trust journal which we have seen since the Crown Company won its suit, refers to the Protective Association as a "mercantile problem." The *Review* gives its readers not

one hint of what has taken place or of the great danger which dental practitioners are in, but merely continues the concerted attack upon the Association.

The Protective Association harbors no ill-will for the indecision and apathy of the profession, and stands ready at the present time to enroll all those who wish to join. In spite of the enormous expenditure of time and energy necessary to the successful carrying on of this litigation, which will be even more complicated and taxing in the future than in the past, and in spite of the fact that the chairman, although doing all this work without compensation, is subjected to slander and abuse as well, he is ready and willing to continue the work if the profession so desire. We speak advisedly when we state that every practitioner who unites with this organization will be taken care of and be protected against any claims for royalty. The present state of affairs is a good illustration of the need of organized effort. What would become of the practicing dentists of this country to-day were the power of the Crown Company unchecked by the influence of the Association? Is it not time the dental profession realized who are their true friends?

Notices.

NATIONAL ASSOCIATION OF DENTAL FACULTIES.

At the annual meeting of this association, held at Niagara Falls July 28 to Aug. 1, 1899, the following officers were elected: President, J. Taft; Vice-President, B. Holly Smith; Secretary, J. H. Kennerly; Treasurer, H. W. Morgan.

ILLINOIS STATE BOARD OF DENTAL EXAMINERS.

The next meeting of this organization will be held at Springfield Sept. 29-30, 1899, at the Capitol Building. Those desiring to take the examination will please notify the secretary two weeks previous to the date set for examination.

J. H. SMYER, Sec'y, 70 State street, Chicago.

MARYLAND STATE DENTAL ASSOCIATION.

At the annual meeting of this association, held at Baltimore June 27, 1899, the following officers were elected: President, E. E. Cruzen; Vice-President, G. M. Smith; Second Vice-President, J. K. Burgess; Corresponding Secretary, Geo. R. Carter; Recording Secretary, Richard Grady; Treasurer, S. C. Pennington; Executive Committee, B. Holly Smith, C. M. Ginrich and W. W. Dunbracco.

MINNESOTA STATE DENTAL ASSOCIATION.

At the annual meeting of this association, held at Northfield, July, 1899, the following officers were elected: President, W. N. Murray; Vice-President, J. M. Walls; Secretary, H. L. Crittenden; Treasurer, H. M. Reid; Chairman Executive Committee, F. H. Orton; Master of Clinics, A. Oure. The next annual meeting will be held at Minneapolis.

VIRGINIA STATE DENTAL ASSOCIATION.

At the annual meeting of this association, July 26, 1899, the following officers were elected: President, R. W. Walker; Vice-President, W. E. Norris; Second Vice-President, B. Bridgeport; Third Vice-President, I. B. Smith; Treasurer, Wm. E. Edwards; Corresponding Secretary, J. Hall Moore; Recording Secretary, F. Keese; Executive Committee, F. W. Stiff, T. H. Parra. more and J. E. Calvin.

NEW JERSEY STATE DENTAL SOCIETY.

At the annual meeting of the New Jersey State Dental Society held at Asbury Park July 19-21, 1899, the following officers were elected: President, Wm. E. Truex; Vice-President, F. Edsall Riley; Secretary, Chas. A. Meeker; Assistant Secretary, H. S. Sutphen; Treasurer, Henry A. Hull. Executive Committee, Oscar Adelberg, H. S. Sutphen, Wm. L. Fish and Frank R. Hindle. Membership Committee, Wm. H. Pruden, N. M. Chitterling, F. G. Gregory, G. M. Holden and J. L. Crater. Member State Examining Board, Chas. A. Meeker.

NORTHEASTERN DENTAL ASSOCIATION.

The fifth annual meeting of the Northeastern Dental Association will be held in Hotel Hamilton, Holyoke, Mass., on Wednesday and Thursday, October 18 and 19, 1899. The Executive Committee hope for a large attendance, as their labors have been crowned with such success that the entire exhibit space has been already engaged; enough essayists of prominence have accepted invitations to fill up all the allotted time; clinics enough have been promised, and thus a meeting worthy of your attendance has been arranged. Be sure and save out the above dates and attend. A cordial invitation is extended to the profession at large to be present.

EDGAR O. KINSMAN, Sec'y.

NATIONAL DENTAL ASSOCIATION.

At the annual meeting of the National Dental Association held at Niagara Falls August 1-4, 1899, the following officers were elected: President, B. Holly Smith; Vice-Presidents, John I. Hart, New York, T. W. Brophy, Chicago, M. F. Finley, Washington; Corresponding Secretary, Emma Eames Chase, St. Louis; Recording Secretary, Geo. H. Cushing, Burbank, Cal.; Treasurer, Henry W. Morgan, Nashville, Tenn.

The next meeting will be held at Old Point Comfort, 1900.

Section 1. Prosthetic Dentistry, Crown and Bridge Work, Metallurgy,

Chemistry and Orthodontia. V. H. Jackson, Chn.; W. E. Walker, Sec'y. II. Dental Education, Literature, Nomenclature, Histology and Microscopy. S. H. Guilford, Chn.; M. F. Finley, Sec'y. III. Operative Dentistry, Materia Medica and Therapeutics. J. Y. Crawford, Chn.; Frank Holland, Sec'y. IV. Physiology, Etiology, Hygiene and Prophylaxis. J. D. Patterson, Chn.; L. E. Custer, Sec'y. V. Anatomy, Pathology and Surgery. W. C. Barrett, Chn.; M. L. Rhein, Sec'y. VI. Clinics. H. J. McKellop, Chn.; M. B. Culver, Sec'y. Under the Amended Constitution these take the place of the former ten sections.

LATEST DENTAL PATENTS.

628467. Dentist's or jeweler's drawer and tray, Thomas C. Howlcroft, Uttoxeter, England.
628484. Device for administering anesthetics, Richard E. Mercer, Detroit.
628487. Attachment for dental dams, Martin O. Nelson, Natick, Mass.
628489. Local anesthetic, Gustave Pertsch, assignor to La Societe Chimique des Usines du Rhone, Anciennement Gilliard P. Monnet et Cartier, Lyons, France.
628524. Dental plugger, Henry Case and E. D. Shaw, Gloversville, N. Y.
628923. Rubber-dam holder, John P. Carmichael, Milwaukee, assignor to S. S. White Dental Manufacturing Co., Philadelphia.
628933. Mercury holder, Edmund D. Gilbert, assignor to S. S. White Dental Manufacturing Co., Philadelphia.
628947. Speed regulator, Guido E. Lob, Chicago, assignor to S. S. White Dental Manufacturing Co., Philadelphia.
629031. Sterilizing spittoon, Andre Guasco, Paris, France.
629321. Barber's or dentist's chair, Hugo R. Kuersten, Chicago.
629324. Dental dam, Charles C. Allen, Kansas City.
629531. Dental articulator, George B. Snow and A. D. Gritman, Buffalo.
629621. Dental plugger, George B. Snow, Buffalo.
630650. Vulcanizer, Seth A. Brown, assignor to Buffalo Dental Manufacturing Company, Buffalo.

TRADE-MARKS.

33211. Tooth powder, O'Rourke & Hurley, Little Falls, N. Y.

O. G. BENNETT, D.D.S.

At the call of an all-wise and overruling Providence, Dr. Orrin G. Bennett, of Janesville, Wis., on the 28th day of July, 1899, at the early age of thirty-six years, passed from this to a higher and better life.

Dr. Bennett was a most respected citizen, and as a professional man he commanded the respect and confidence of his fellow-practitioners and the public, and was considered an able and conscientious gentleman in the practice of his profession. But above and beyond all else he was a man of true moral worth and his one great aim in life was to live up to the high ideal he had established as to what a man, as a husband and father, should be. Of a sanguine temperament and sunny disposition he was affable in manner, dignified in bearing and gentle and sympathetic in spirit. The loss of such

an one from our midst is always an occasion of sadness and sorrow. But though his sojourn among us was of brief duration, we have the consoling knowledge that his life was successful in uplifting and making better, by his cheery words and good will towards all, everyone with whom he came in contact.

Resolved, That we will ever cherish the memory of our departed brother, and seek to establish and perpetuate the high examples that were so fully illustrated in his short but noble life.

Resolved, That this statement and resolution be placed upon the memorial page of the proceedings of this society; that a copy be transmitted to the family of the deceased, and that it be sent to the various dental journals for publication.

JANESVILLE DENTAL SOCIETY.

R. R. POWELL, Pres.

IRA HOLSAPPLE, Sec'y.

Janesville, Wis., July 29, 1899.

INTERNATIONAL CONGRESSES OF THE EXPOSITION OF 1900— INTERNATIONAL DENTAL CONGRESS.

The National associations of French dentists have organized an International Congress to be held under the patronage of the French Government during the Universal Exposition of 1900. Similar congresses were held during the Paris Exposition of 1889 and at the Columbian Exposition at Chicago in 1893. The principal dental societies of the entire world will be represented. The date has been fixed to the seven days from August 8-14, 1900, immediately following the two important congresses—Medical Ethics (practitioners) and the Medical Congress proper.

The work of the Dental Congress will be divided into eight sections.

1. Anatomy, Physiology and Histology. 2. Special Pathology and Bacteriology. 3. Operative Dentistry and Special Therapeutics. 4. General and Local Anesthesia. 5. Prosthesis, Dental Orthopedia and Facial Restorations. 6. Teaching and History of the Dental Art. 7. Legislation, Jurisprudence and Professional Ethics. 8. Hygiene, Public Dental Service.

Two sorts of communications will form the matter of discussion of the Congress; first, those received in advance by the committee, for the preparation of reports in each section; second, subjects chosen by the authors (the latter papers may be written in French, English, German, Russian, Italian or Spanish—only the conclusions must be in French). There will also be practical demonstrations by operations, either of operative dentistry or of dental prosthesis, and the exposition of new instruments.

The conditions of membership for the Congress are the legal right to practice dentistry, honorable exercise of the profession, and the recommendation of the National Committee. The Organizing Committee will also consider the applications of persons not exercising the profession. Members who desire to present communications to the Congress should give notice to the Secretary General at least three months before the opening of the Congress. With this notice they should send the text of the conclusions which sum up the paper; and these conclusions will be translated into French by the Committee.

The subscription for membership is 25 francs, giving a right to all the privileges of the Congress. Subscriptions should be sent to the Treasurer, M. Viau, 47 Boulevard Haussmann, Paris. Communications are to be addressed to the Secretary General, M. le docteur Sauvez, 17 Rue de Saint Petersbourg, Paris.

NATIONAL ASSOCIATION OF DENTAL FACULTIES.

The sixteenth annual session of the National Association of Dental Faculties was held in Niagara Falls, commencing Friday, July 28, 1899.

The following colleges were represented, as noted:

Birmingham Dental College, Birmingham, Ala.—T. M. Allen.

University of California, Dental Department, San Francisco, Cal.—A. A. d'Ancona.

Colorado College of Dental Surgery, Denver, Col.—J. S. Jackson.

University of Denver, Dental Department, Denver, Col.—A. H. Sawins.

Columbian University, Dental Department, Washington, D. C.—J. R.

Hagan.

Howard University, Dental Department, Washington, D. C.—A. J. Brown.

National University, Dental Department, Washington, D. C.—A. D. Cobey.

Atlanta Dental College, Atlanta, Ga.—H. R. Jewett.

Dental Department of Atlanta College of Physicians and Surgeons, Atlanta, Ga.—Frank Holland, S. W. Foster.

Chicago College of Dental Surgery, Chicago, Ill.—Truman W. Brophy.

Northwestern University Dental School, Chicago, Ill.—Theo. Menges.

Indiana Dental College, Indianapolis, Ind.—Geo. E. Hunt.

State University of Iowa, Dental Department, Iowa City, Ia.—W. S. Hosford.

Louisville College of Dentistry, Louisville, Ky.—H. B. Tileston.

Baltimore College of Dental Surgery, Baltimore, Md.—M. W. Foster.

University of Maryland, Dental Department, Baltimore, Md.—John C. Uhler.

Boston Dental College (Tufts College Dental School), Boston, Mass.—Chas. P. Thayer.

Harvard University, Dental Department, Boston, Mass.—Thomas Fillebrown.

College of Dental Surgery of the University of Michigan, Ann Arbor, Mich.—J. Taft, N. S. Hoff.

Detroit College of Medicine, Dental Department, Detroit, Mich.—G. S. Shattuck.

University of Minnesota, Dental Department, Minneapolis, Minn.—W. P. Dickinson.

Kansas City Dental College, Kansas City, Mo.—J. D. Patterson.

Western Dental College, Kansas City, Mo.—D. J. McMillan.

Marion Sims College of Medicine, Dental Department, St. Louis, Mo.—J. H. Kennerly.

Missouri Dental College, St. Louis, Mo.—A. H. Fuller.

University of Omaha, Dental Department, Omaha, Neb.—A. O. Hunt.

University of Buffalo, Dental Department, Buffalo, N. Y.—William C. Barrett, R. H. Hofheinz.

New York College of Dentistry, New York City.—Faneuil D. Weiss.

New York Dental School, New York City.—John I. Hart, Roderick M. Sanger.

Cincinnati College of Dental Surgery, Cincinnati, O.—G. S. Junkerman, W. T. McLean.

Ohio College of Dental Surgery, Cincinnati, O.—H. A. Smith.

Western Reserve University, Dental Department, Cleveland, O.—H. L. Ambler.

Ohio Medical University, Dental Department, Columbus, O.—Otto Arnold.

Pennsylvania College of Dental Surgery, Philadelphia, Pa.—Wilbur F. Litch.

Philadelphia Dental College, Philadelphia, Pa.—S. H. Guilford.

University of Pennsylvania, Dental Department, Philadelphia, Pa.—James Truman, Edward C. Kirk.

Pittsburg Dental College, Pittsburg, Pa.—Walter H. Funderburg.

School of Dentistry, Central Tennessee College, Nashville, Tenn.—G. W. Hubbard.

University of Tennessee, Dental Department, Nashville Tenn.—L. G. Noel.

Vanderbilt University, Dental Department, Nashville, Tenn.—Henry W. Morgan.

Tacoma College of Dental Surgery (North Pacific Dental College), Portland, Ore.—Geo. H. Chance.

Milwaukee Medical College, Dental Department, Milwaukee, Wis.—Geo. V. I. Brown.

Royal College of Dental Surgeons of Ontario, Toronto, Canada.—J. B. Willmott.

The treasurer reported that the Dental Department of Tennessee Medical College, of Knoxville, Tenn., was no longer in existence, having been absorbed by another school.

The Tacoma College of Dental Surgery, having removed to Portland, Ore., was given authority to change its name to North Pacific Dental College.

The trustees of Boston Dental College accredited Dr. C. P. Thayer as delegate to explain to the association that they had transferred the institution, with all its appurtenances, to Tufts College, and to request that the Tufts College Dental School be permitted to make application for membership at this meeting. On motion it was ordered that Tufts College Dental School be accepted as a continuance of the old college, and that the change of name be approved.

The applications for membership of the following schools, having been reported as regular by the Executive Committee, lie over for one year for final action:

Medico-Chirurgical College of Philadelphia, Dental Department, Philadelphia, Pa.

Central College of Dentistry, Indianapolis, Ind.

College of Dentistry, University of Southern California, Los Angeles, Cal.

Illinois School of Dentistry, Chicago, Ill.

Washington Dental College and Hospital of Oral Surgery, Washington, D.C.

Keokuk Medical College, Dental Department, Keokuk, Iowa.

The Committee on Text-Books reported recommending that the following be adopted: "Anatomy and Histology of the Mouth and Teeth," by I. N. Broomell, D.D.S.; "The Practice of Dental Medicine," by George F. Eames, M.D., D.D.S.; "Comparative Dental Anatomy," by A. H. Thompson, D.D.S. (recommended last year in proof); "Methods of Filling Teeth," second edition, by R. Ottolengui, M.D.S.

The committee had also examined "Chemistry and Metallurgy Applied to Dentistry," by Vernon J. Hall, Ph.D.; and while admirable and containing many excellent features, the committee believed it unwise to recommend it as a text-book, inasmuch as there were already two excellent works on the same subject on the list.

Of "Interstitial Gingivitis, or, so called Pyorrhea Alveolaris," by Eugene S. Talbot, M.D., D.D.S., the committee reported that it contained evidence of laudable and extensive research, but the subject is still a matter of so much controversy and diversity of opinion as to make undesirable a text-book upon it at the present time.

The committee also suggested the removal of Clifford's "Manual of Recitations," adopted in 1892, and Burchard's "Compend of Pathology," adopted in 1897.

The following resolutions, laid over under the rules from 1898, were adopted:

Offered by Dr. Allen:

Resolved, That it is the sense of this association that the present method of bestowing scholarships is no longer called for, and is detrimental to the best interests of the profession, and that hereafter no college of this association shall grant either free or beneficiary scholarships not absolutely made obligatory in their charter.

Offered by Dr. Barrett:

Resolved, That it shall be the duty of the secretary of this association to present at the opening of each annual session a list of the colleges, members of this association, who have been unrepresented for two years, that proper action may be promptly taken.

The resolutions of Drs. Allen and d'Ancona concerning the attendance of students were substituted by the following, offered by Dr. Willmott, which was adopted:

Resolved, That students in attendance at colleges of this association, to obtain credit for a full term, must be and remain in attendance until the close of the session.

In accordance with this action, Rule 4 was amended to read as follows:

4. In cases where a regularly matriculated student, on account of illness, financial conditions, or other sufficient cause, abandons his studies for a time, he may reenter his college at the same or a subsequent session; or where, under similar circumstances, he may desire to enter another college, then with the consent of both deans he may be transferred.

Rule 9 was amended to read as follows:

ADMISSION OF UNDERGRADUATES OF MEDICINE.

9. Undergraduates of reputable medical colleges who have regularly completed one full scholastic year of a six months' term and passed a satisfactory examination in the studies of the freshman year may be admitted to the junior grade in colleges of this association, subject to other rules governing admission to that grade.

The Committee on Conference with the National Association of Dental Examiners reported, as the result of several conferences held with a similar committee from the Examiners' Association, that an agreement had been reached concerning the matters which had been in controversy between the two associations for several years. The report was adopted. [The basis of the agreement, with some account of the difficulties referred to, will be found at the end of this report.]

The following resolution was unanimously adopted:

Resolved, That the thanks of the National Association of Dental Faculties are due to the Chicago College of Dental Surgery for the courage and persistence with which it has maintained what we believe to be a correct principle, and that we regard the placing as unrecognized and disreputable in the newspapers and otherwise of one of the oldest and best of our professional teaching institutions an injustice that demands complete rectification.

Dr. Barrett offered the following, which were adopted:

Resolved, That the commonly accepted Code of Ethics regulating the conduct of practitioners in their relations with other practitioners be approved and made obligatory upon the dental colleges of this association in their relations with other colleges.

Resolved, That the section of the Code which refers to public advertisements be interpreted to forbid the advertising of the infirmaries of dental colleges in any manner that might be construed to be unprofessional if done by a practitioner.

Resolved, That as dental colleges should in every practicable manner impress the importance of ethical conduct upon their students, and should themselves set a good example in this particular, their public advertisements should be confined to a simple statement of the location of the schools, the date of opening and closing, with any other really essential facts, all details being reserved for the annual announcement, which itself shall not violate the usually accepted ethical tone.

Dr. Taft offered the following:

Resolved, That a commission, consisting of three persons, be appointed, whose duty it shall be to take cognizance of, investigate, and advise with any parties contemplating the establishment of a new college or the reorganization of an old one.

In the performance of the duties of this commission it shall be competent to take into consideration the following points, viz.:

The consideration of any proposed new dental college; taking into account all the circumstances that attach to it; the motive that prompts such an organization; the need for it; the proposed locality; the character and ability of those who propose to conduct it; the sufficiency of the resources that may be available for its establishment, and whether, on the part of the promoters, there is a just appreciation of that which is required for such an institution.

The attainment of full knowledge on these points would enable the commission to advise wisely.

It would be the duty of this commission to report to this body at each annual meeting.

The resolution was adopted, and it was ordered that the commission be elected with the other officers.

The following amendment to the constitution was adopted:

Change Article V to read as follows:

Article V. The Executive Committee shall consist of five members, three of whom shall be elected annually; the two receiving the higher number of votes shall hold office for two years each. The Executive Committee shall have power to designate the time and place of meeting, make preparations for same, and transact such other business as usually devolves upon such committee. That five members be elected this session, the two receiving the higher number of votes to serve for two years, the other three for one year each.

On motion of the Executive Committee, it was ordered that colleges making application for membership in this body shall have present a copy of their

annual announcement, and that a duly authenticated representative of the school be present at the meeting; without which the application shall not be considered.

It was decided that the change from six to seven months' terms, which goes into effect with the session of 1899-1900, should apply to all students in colleges of the association, even though the students may have previously attended under the six months rule,

On motion of Dr. Barrett, it was ordered that a Committee on Law, to consist of three members, be elected to serve as a standing committee, which shall be authorized to levy such assessments upon the members of the association as may be necessary for the payment of past legal expenses and such as may accrue in the future in the suppression of the issue of fraudulent diplomas. Such assessments to be lodged with the treasurer, and paid upon the order of the Committee on Law. It was also ordered that all legal matters which may arise in connection with the National Association of Dental Faculties shall be referred to this committee.

The Committee on Foreign Relations, in concluding the report of its work for the year, offered the following resolutions, which were adopted:

Resolved, That the Foreign Relations Committee be instructed to take any steps which they may deem advisable for the putting an end to the issuing of fraudulent and irregular degrees, and to this end are authorized during the coming year to use any funds in the treasury of the association upon the approval of the Law Committee.

Resolved, That the European Advisory Board of the Foreign Relations Committee be and is hereby invited each year to send a delegation to attend the annual meeting of this association, and that such delegation be accorded seats in the meetings of the association, with all the privileges of debate.

Resolved, That no student coming from Europe shall be received by any member of the association until his credentials shall have been approved by the members of the European Advisory Board for the country from which he claims to come.

Resolved, That the Committee on Foreign Relations be authorized to appoint Advisory Boards for countries outside of Europe, whenever in their judgment it is advisable to do so, and report any such action at the next succeeding meeting of this association.

Resolved, That the Foreign Relations Committee be given jurisdiction in all foreign American dental educational matters, subject always to the approval of the National Association of Dental Faculties, to which a full written report shall be submitted annually.

Following are the members of the European Advisory Board, so far as appointed:

Great Britain—Wm. Mitchell, W. E. Royce and B. J. Bonnell.

Holland and Belgium—J. E. Grevers, Ed. Rosenthal and C. van de Hoeven.

Denmark, Norway and Sweden—Elof Forberg.

Germany—W. D. Miller, C. F. W. Bodecker and — Hesse.

Italy and Greece—Albert T. Webb, Tullio Avanzi and A. V. Elliott.

France—J. H. Spaulding, I. B. Davenport and G. A. Roussel.

Spain and Portugal—Purtuondo, Florestan Aguilar and — Thomas.

Switzerland and Turkey—L. C. Bryan, Theo. Frick and Paul Guye.

Japan, China and Corea—Louis Ottogy.

Australia and New Zealand—Alfred Burne.

The following resolution, offered last year, was laid over for another year:

Offered by Dr. Hosford:

Resolved, That a four years' course in a reputable college leading to the degree of A.B., Ph.B., or B.S., or four years of biological work, be accepted as one year's credit in the colleges of this association, subject to other rules governing admission to second year grade.

Resolved, That students matriculated in both a collegiate and dental department of a university, having completed the work of the first year in dentistry during the four years collegiate course, may, on graduation with collegiate degree, be given full credit for one year in colleges of this association.

The following, offered by Dr. Foster, was referred to the Executive Committee, to be reported upon next year,

Resolved, That when a student fails in any part of the requirements for obtaining his final degree, such student must hold over till the next regular course, during which time he may reenter and remove such conditions by completing his work, and can only apply for his degree at the close of term as announced in the catalogue of such school.

The following resolutions lie over under the rule till next year:

Offered by Dr. Barrett:

To change Rule 1 to read as follows:

PRELIMINARY EXAMINATIONS.

1. The following preliminary examination shall be required of students seeking admission to colleges of this association:

a. The minimum preliminary educational requirement of colleges of this association, after the session of 1901-1902, shall be a certificate of entrance into the third year of a high school, or its equivalent, the preliminary examination to be placed in the hands of the state superintendent of public instruction.

b. Nothing in this rule shall be construed to interfere with colleges of this association that are able to maintain a higher standard of preliminary education.

Offered by Dr. Weisse:

Resolved, That Rules 8, 9 and 10 of the Code of Rules be rescinded and the following be substituted therefor:

That advanced standing to the junior or senior classes of institutions of this association shall only be upon certificate of one or two sessions' attendance, respectively, in an institution belonging to this association.

Offered by Dr. Truman:

Resolved, That members of this association violating the rules of this body shall, upon conviction, be fined not less than one hundred dollars for each offense, or be subject to censure, suspension or expulsion, at the pleasure of the association.

Offered by Dr. Barrett:

Resolved, That the Executive Committee be instructed that, except under what they shall decide to be unusual or extraordinary circumstances, and which in their report they shall detail to the association, they shall not report favorably any application for the admission of a new college in the following instances:

1. When there has not been actually secured and bought or leased for a term of not less than three years, and fitted up with all required equipments, a sufficiently commodious and convenient building, entirely adequate to the needs of not less than one hundred students. Such equipment shall include not only the laboratories, infirmaries, etc., with proper chairs, benches, and all apparatus required for complete practical dental instruction, but the rooms and fittings necessary for scientific training with apparatus and equipments necessary for the proper teaching of bacteriology, histology, microscopy, chemistry, and such other scientific studies as should form a part of an advanced dental curriculum of study.

2. When the character and attainments of its faculty, which must already have been named, and a list of the members of which with the respective positions they are to occupy, shall be embodied in the application presented, are not such as to give assurance that the school will be conducted in a manner to reflect credit upon the dental profession, and to insure complete and adequate instruction in all branches of a broad dental curriculum of study.

3. When the proposed dental college or department is evidently and unmistakably intended primarily for the purpose of sustaining or strengthening another existing institution with which it is to be allied.

4. When the city or town in which such college is to be located already contains a college, or colleges, for dental teaching, of acknowledged efficiency, liberal character, and ethical standing, sufficient in their opinion for the promotion of the best interests of dentistry and the dental profession.

Offered by Dr. Guilford:

Resolved, That while examinations for progress should continue to be held annually upon the subjects taught during the year, no final examinations shall be held until the close of the third year.

Dr. Taft, from the Committee on Curriculum, submitted as the report of his committee the following:

SCHEDULE OF STUDIES.

FIRST YEAR.	Hrs. Per Wk.	SECOND YEAR.	Hrs. Per Wk.	THIRD YEAR.	Hrs. Per Wk.
Anatomy and Dissection...	2	Anatomy, Regional.....	1	Therapeutics.....	1
Physiology.....	2	" Comparative..	1	Pathology.....	1
Chemistry, Inorganic.....	2	Physiology.....	2	Surgery, General.....	1
Chemistry, Laboratory...	4	Chemistry, Organic.....	2	" Oral.....	1
Dental Anatomy.....	2	" Laboratory...	4	Jurisprudence.....	1/2
Prosthetic Technic.....	10	Metallurgy, Didactic.....	1	Orthodontia, Didactic...	1
Histology, Didactic.....	4	" Laboratory..	2	" Practical...	1
" Laboratory.....	4	Materia Medica.....	1	Operative Dentistry.....	2
Materia Medica.....		Operative Technic.....	4	Prosthetic Dentistry.....	2
Comparative Anatomy...		Bacteriology, Didactic...	4	Electricity.....	
		Operative Dentistry, Di-		Ethics.....	
		dactic.....	2	History.....	
		Orthodontia Technic.....	1		
		Pathology.....	2		
		Orthodontia, Didactic....			

INFIRMARY.

Prosthetic Dentistry.....	5	Prosthetic Dentistry.....	6
Crown and Bridge-Work..	3	Operative Dentistry.....	15
		Crown and Bridge-Work..	4

The following were elected officers for the ensuing year: Jonathan Taft, president; B. Holly Smith, vice-president; J. H. Kennerly, secretary; Henry W. Morgan, treasurer; S. W. Foster, J. B. Willmott, executive committee for two years; H. B. Tileston, Theo. Menges (chairman), S. H. Guilford, executive committee for one year; W. T. McLean, J. D. Patterson, W. S. Hosford, ad interim committee; Truman W. Brophy, Edward C. Kirk, Albert H. Fuller, commission on proposed new colleges; A. O. Hunt, Henry W. Morgan, W. C. Barrett, committee on law.

The newly elected president appointed the following committees: T. M. Allen, W. S. Hosford, W. P. Dickinson, G. S. Shattuck, J. G. Templeton, committee on schools; A. J. Brown, John I. Hart, Thomas E. Weeks, Edward C. Kirk, Thomas Fillebrown, committee on text-books; W. C. Barrett, J. D. Patterson, T. W. Brophy, S. H. Guilford, H. W. Morgan, committee on foreign relations; N. S. Hoff, G. V. I. Brown, committee to secure papers to be read at the next annual meeting; S. H. Guilford, W. F. Litch, N. S. Hoff, A. H. Fuller, C. L. Goddard, committee on curriculum.

The Executive Committee reported that it had decided to adopt the suggestion of Dr. Wilmott to convene the next meeting on the day of the adjournment of the National Dental Association at the same place.

Adjourned to meet at Old Point Comfort, Friday, June 29, 1900.

An important fact in connection with the meeting of the National Association of Dental Faculties was the presence of three of the members of the European Advisory Board of the Committee on Foreign Relations: Drs. Lyman C. Bryan, of Basel, Switzerland; John E. Grevers, of Amsterdam, Netherlands, and William Mitchell, of London, England.

Dr. Grevers, in speaking of the reception to advanced standing of students from foreign countries, probably struck the keynote of the entire situation. He was impressed, he said, with the idea that the foreigner comes to this country to study dentistry for one of two reasons: First, as a graduate, or as one having fulfilled the requirements in his own country, who desires to still further develop his manipulative ability by the acquirement of American methods; or, second, because he cannot fulfill the requirements in his own country, and hopes to secure something here which will enable him to return home and practice. So that if the applicant from a European country is not supplied with the proper certificates the colleges should be cautious about receiving him to advanced standing.

The proceedings of the late meeting were varied by two pleasant, albeit unusual, incidents.

The first of these was a trolley ride of the members of the association and their friends to Buffalo, twenty-five miles away, and return, as the guests of the dental department of the University of Buffalo. Arrived at Buffalo they were taken to the college building, where an ample collation was served, accompanied by several felicitous speeches. The various departments of the college were then inspected and pronounced good, after which the party again boarded the trolley cars and were taken to view the grounds where the Pan-American Exposition is to be held two years hence. Then came the return to Niagara Falls, which was accomplished without incident and without fatigue, every one expressing his gratification over the outing.

The second was of the same nature, but involved a visit to a foreign land. The Royal College of Dental Surgeons of Ontario invited the members of the Faculties Association and also those of the National Association of Dental Examiners to visit the college and view the city of Toronto. In response about seventy-five persons took the train at Niagara Falls for Lewiston, where they boarded the steamer for the journey across Lake Ontario to Toronto. Arrived here a short walk brought them to McConkey's, where a fine collation was served and appropriately disposed of. Tallyhos and carriages then conveyed the party to various points of interest in the city, among others Parliament house, where they alighted and spent a short time admiring its beauty of architecture and internal arrangement and fittings. A short drive brought them to the Royal College of Dental Surgeons of Ontario, where they were assembled in the main lecture-room, and speeches of felicitation and good-will followed; after which the visitors circulated through the building, inspecting the equipment of the college and having

explained to them the methods of instruction in various branches. It was the universal opinion that the school was admirably equipped for the systematic instruction of students of dentistry. The entrance to the college was tastefully draped with the flags of Great Britain and the United States. From the college the party proceeded to the Foresters' Temple Cafe, where a second collation was served; after which they were driven to the steamboat landing. As the vessel moved off three cheers for the Royal College of Surgeons were given with a will. The return journey was made without mishap, and the excursionists unanimously declared they had had one of the most delightful outings of their lives.

The members of the dental profession will be glad to learn that the differences existing for some years between the National Association of Dental Faculties and the National Association of Dental Examiners has been reconciled. These differences have been the cause of much friction between the two bodies.

The cause of the trouble was the refusal of the colleges to accept various rules which have crystalized into what is known as Rule 8 of the code of rules, Sections 1 and 2, of the Examiners' Association, because the colleges were not consulted in its framing.

The attempted enforcement of this rule recently led to litigation in the state of Wisconsin. The State Board of Dental Examiners of that state refused to admit to registration the diplomas of the Chicago College of Dental Surgery, the Northwestern University Dental School, the Pennsylvania College of Dental Surgery, the Ohio Medical University Dental Department, the Philadelphia Dental College, and others, on the ground that they did not in their preliminary examination come up to the standard established by Rule 8, and demanded that graduates of these institutions presenting diplomas for registration should submit to examination by the board as to their qualifications to practice dentistry.

This contention of the board was resisted by a graduate of the Chicago College of Dental Surgery, who brought mandamus proceedings to compel the board to accept his diploma. The board moved to quash the proceedings, which motion was denied by the court, with leave to the board to file its answer. The answer was filed, and the case was in that condition at the time of the meeting of the two associations at Niagara Falls on the 28th of July, 1899.

With a view to the adjustment of the difficulty committees of conference were appointed by the two bodies, which, after going over the matters in dispute, agreed on the side of the National Association of Dental Examiners to recommend that Rule 8 be rescinded; that all colleges having membership in the National Association of Dental Faculties be placed upon the list of recognized schools, and that all litigation be withdrawn; and on the side of the National Association of Dental Faculties that a new rule governing the preliminary requirements for admission to the college courses be adopted.

This action was ratified by the associations. The Examiners' Association adopted a new Rule 8, Sections 1 and 2 of which read as below, the remainder of the rule being substantially as before: Rule 8, new Sections 1 and 2:

"Section 1. Colleges desiring recommendation to the state boards by the National Association of Dental Examiners shall make application for such recommendation through the Committee on Colleges, on blanks provided for that purpose. This rule to apply only to schools making application to the National Association of Dental Examiners for recommendation and such schools as may be dropped.

"Section 2. The following preliminary examination shall be required of students seeking admission to colleges recommended by this association. The minimum preliminary educational requirements of colleges of this association for the session of 1900-1901 shall be a certificate of entrance into the second year of a high school or its equivalent, the preliminary examination to be placed in the hands of the State Superintendent of Public Instruction, as adopted by the State Board of Missouri."

The Faculties' Association adopted the following rule governing the preliminary educational requirements of students: "The minimum preliminary educational requirement of colleges of this association for the session of 1900-1901 shall be a certificate of entrance into the second year of a high school or its equivalent, the preliminary examination to be placed in the hands of the State Superintendent of Public Instruction.

"Nothing in this rule shall be construed to interfere with colleges of this association that are able to maintain a higher standard of preliminary education."

The cause of friction being removed, there is every assurance that the disputes which have arisen will be speedily adjusted and the two bodies will thereafter work in harmony.

News Summary.

D. L. ARTER, aged 50 years, died at Gomer, O., Aug. 5, 1899.

W. C. BERRY, a young dentist of Plano, Tex., died of typhoid fever Aug. 5.

M. J. HOLMES, a Randolph, Wis., dentist, died of heart disease, at the age of 27 years.

B. LINCOLN SMYTH, 32 years old, a dentist of New York city, was drowned Aug. 1, 1899.

J. M. LAFFATER, a dentist of Manchester, Tenn., was shot during a quarrel, July 22, 1899.

HOWARD SHERMAN, a dentist of Winnipeg, Canada, was drowned Aug. 7, 1899, while fishing.

C. A. POOLER, a dentist of Syracuse, N. Y., is ill with blood-poisoning and not expected to recover.

THOS. W. SLATER, a dentist of New York, died Aug. 10, 1899, from a dose of aconite taken by accident.

J. N. WILEY, a prominent dentist of Santa Rosa, Cal., died at that place Aug. 10, 1899, of Bright's disease.

WILLIAM T. SHANNON, a former Brooklyn dentist, died at Hackensack N. J., July 28, 1899, aged 78 years.

CHARLES S. JONES, a well-known dentist, died of heart disease at Philadelphia, Aug. 20, 1899, aged 71 years.

H. R. MORTON, one of the oldest dentists of San Francisco, died in that city July 23, 1899, at the age of 60 years.

DR. R. G. GUNN, a young dentist of Springfield, Ill., was robbed and had his skull fractured by footpads, July 28, 1899.

F. L. LANE, a dentist of Hammond, Ind., was the victim of a paralytic shock Aug. 3, 1899, and grave doubts are held as to his recovery.

ANOTHER NEW COLLEGE.—The California College of Dental Surgery has recently been incorporated in San Francisco with a capital of \$100,000.

A. ALDERDICE, a dentist of Prescott, Ariz., died in Chicago July 22, 1899, from an overdose of morphin, whether taken by accident or intentionally is not known.

LYONS, FRANCE, forces the American dentist resident therein to pay an annual license of \$154 on his office and the same sum on his residence.—*Chicago Paper*.

DENTAL PARLORS SUED.—A woman in St. Louis has sued one of the dental parlors for \$5,000 because, as she claims, the work done on her teeth was not at all satisfactory.

PARALYZED BY COCAIN.—A fourteen-year-old boy at Mt. Holly, N. J., is paralyzed as a result of an application of cocain by a dentist previous to extraction of teeth.

TEETH CHOKED HER.—A woman in Virginia swallowed her false teeth, and as it was impossible to dislodge them, an operation was performed from which she failed to rally.

FALSE TEETH ARE DANGEROUS.—So thinks a woman in this city who was run into by two men on a tandem. The false teeth of the man on the front seat struck her head with such force that they entered it.

BOGUS DEGREES.—"This thermometer," said Rivers, looking at a cheap one that was indicating a temperature of something like 40 degrees below zero, "is like a snide dental college; its degrees are bogus."

GILDING REFINED GOLD.—Some estimable citizens of Philadelphia are not satisfied with the normal stillness of that quiet town, and recently presented to the mayor a petition for a "quiet Sabbath?"—*Med. Record*.

BURNED BY A DENTIST.—A man in Missouri has sued his dentist for \$2,000 damages because, as he alleges, a lighted alcohol lamp was pushed against him by a dentist's assistant, and his arm was badly burned.

PORTO RICO'S NEW LAW.—A dentist who has been practicing in Porto Rico for nearly ten years was recently notified that he must suspend practice because his education did not conform to the requirements of the laws, and the Washington dentists have protested the occurrence to the war department.

F. H. FINCKE, a dentist of Chicago, who was more than ordinarily well educated, and had recently been appointed on the staff of the American Commissioners to the Paris Exposition, died Aug. 13, 1899, at the age of 30 years.

PLASTER OF PARIS IMPRESSIONS.—In taking plaster impressions, let the patient thoroughly rinse out the mouth with a little milk immediately before the tray is inserted, and there will then be no need to use vaselin or glycerin, either of which is objectionable to many patients.

CHLOROFORM AS A HEMOSTATIC.—According to the *Jour. de med. de Paris* for July 2, Dr. Spaak of Brussels has obtained excellent results from a mixture of two parts of chloroform with one hundred parts of water. This mixture is said to rapidly arrest hemorrhage after tooth extraction.

TO CLEAN AN OIL STONE.—Smear a flat block of wood with glycerin and fine pumice, and rub the stone, face down, till all traces of previous usage have disappeared. This will greatly improve the working qualities of the stone. To ruin an oil stone clean it with kerosene.—*Brit. Jour. Dent. Science.*

RIGHT TO REVOKE A LICENSE TO PRACTICE.—According to the *Chicago Medical Recorder* for July, the supreme court of Iowa recently rendered a decision that the state board of medical examiners possessed the right to revoke the license of any physician whom it considered incompetent to practice medicine.

SECOND SOLDERING.—Place a piece of lower karat solder than was used on first soldering in mercury until the surface is slightly amalgamated. It will then flow very readily, while the appearance of the finished piece is not injured, as the mercury is sublimated in the heating, leaving the finished piece as it originally was.—*American Dentist.*

PAT.—Ann (reading laboriously): Hev you seen this Mike? It sez here that whin a mon loses wan av his sinsis, his other sinses get more deveuyeped. F'r instans, a blind mon gets more sinse av hearin', and touch, an'—

Mike—Shure, an' it's quite thrue; Oi've noticed it meself. When a mon has won leg shorter than the other, begorra, the other leg's longer, ain't it, now?

REMOVAL OF MOLES.—The *Medical Times* gives a simple procedure for the removal of moles without having recourse to the knife. Shave a match or sliver to as fine a point as possible, dip in carbolic acid and lightly touch the mole, care being taken to prevent the acid touching any other portion of the skin. Apply this every three or four days, and the mole will gradually disappear, leaving its space clean and healthy.

"THE PRACTICE BUILDER."—We owe an apology to Chas. R. Hambly, D.D.S., for not making earlier mention of this, his late addition to dental literature. As its title indicates, it is particularly devoted to the business side of dentistry. Dr. Hambly possesses the exceptional qualifications necessary to produce such a work, for aside from the fact that he is the author of a number of recognized works on dentistry, he is essentially a business man. It is a veritable *multum in parvo*, treating, as its author fittingly observes,

of "everything that affects the professional reputation and financial success of a dentist." We commend it to the careful perusal of every dentist. Price, cloth, \$5.00; red calf leather, \$6.00. American Dental Publishing Co., Bradford, Pa.

TREATMENT OF FURUNCULOSIS.—In the *Deutsche Med. Woch.* of May 4, 1899, A. Philippson advises the use of the application of salicylic acid, the pure acid in limited areas, and in extensive areas a 2-per-cent alcoholic solution or a 2½-per-cent vaselin ointment. He claims thereby a more hasty necrosis with expulsion of core, and a more speedy subsidence of the immature boils.

SURGICAL INSTRUMENTS FREE OF DUTY.—A decision was handed down by Judge Colt of the United States Circuit Court in Boston on July 7, 1899, reversing the decision of the board of appraisers which held that surgical instruments brought to this country by a medical man for his personal use were dutiable. The court holds that the instruments are not dutiable, being "scientific instruments" within the meaning of the law.—*Med. Record.*

TASTE VS. ODOR.—Professor Patrick, of Chicago, after a series of observations and comparative experiments relating to the confusion between tastes and odors, suggests in a recent paper that a great economy in household expenses might be accomplished by merely blindfolding the family before sitting down to table. If the influences of smell were removed by some contrivance at the same time, most of the savory dishes and drinks now so popular could be replaced by the simplest and cheapest materials.—*Med. Age.*

ADMINISTRATION OF CASTOR OIL.—Castor oil, cod-liver oil, and other fatty oils are stated by Lowy to be rendered easy to take by the following method: Beer is poured into a conical wineglass to the height of about a centimetre, then the dose of castor or other oil, and finally the froth of beer to the height of another centimetre is added. The whole may be swallowed at a draught without experiencing any other taste than that of the beer. Beer froth is quickly obtained by beating up powdered sugar with beer.—*Ther. Monaps.*

SOLD HIS AFTER-BIRTH.—A medical student was recently asked to take a Sunday school class, which, after some protest, he consented to do. He got on very well with the questioning, but when it came to parting out knowledge he began to get a little rocky. He managed Abraham, Isaac and Jacob very well, but when he explained to the gaping kids that Esau was a man who sold his after-birth for a bottle of potash the vicar hinted to him in no measured terms that it was time he was home and had his tea.—*American Homeopathist.*

ASPHYXIA.—I do not consider traction of the tongue perfectly free from all danger; at least, I cannot imagine why muscle bundles should not be torn in the manipulations. By tickling the epiglottis nothing can be injured. We know by daily experience how anxiously we try to avoid touching the epiglottis in intralaryngeal operations, even after thorough cocaineization. We are afraid of the reflex caused by the least sensation of tickling. Ought we not to learn by this experience? Therefore tickling the epiglottis might perhaps be tried as a means of resuscitation.—*W. Freudenthal.*

ILLINOIS SCHOOL OF DENTISTRY.—This institution has recently removed to its new home in the Yukon Building, corner Clark and Van Buren streets, Chicago. The arrangement of the various departments appears to be exceptionally good. The building is new and is built with a view of admitting all the light possible. The location for clinical purposes is excellent. Drs. Elgin MaWhinney and B. J. Cigrand are the newest additions to its faculty.

The application of the school for membership in the National Association of Dental Faculties was favorably received and acted upon at its July meeting at Niagara Falls.

PURULENT OTITIS MEDIA.—When the tympanic cavity has become the seat of chronic suppuration, with ulceration of the mucous membrane extending into the antrum and mastoid cells, it becomes a standing menace to the safety of the patient. The disease progresses insidiously, and one cannot be certain as to where or when it may end. A person might as well have a charge of dynamite in the mastoid antrum or cells, as one cannot know the moment when accidental circumstances may arise which may cause the infective matter to become widely disseminated all over the cerebro-spinal system. Chronic otorrhea is much too lightly regarded, and is frequently considered as a mere inconvenience instead of a menace to life.—*Macewen, Med. Record.*

COLLUTORE FOR FETOR OF THE MOUTH.—The *Riforma medica* for June 3 gives the following formula:

R	Camphor.....	5 parts
	Salicylic acid {	
	Oil of anise, { each.....	10 "
	Powdered benzoin, {	
	Calcium hypochlorate, { each.....	20 "
	Glycerin.....	200 "
	Alcohol.....	300 "

M. Keep in a colored bottle. A coffeespoonful in a glass of water, to be used as a mouth-wash.

TEETH OF THE YOUNG.—The *British Medical Journal* for July 8, in an editorial comment on the Teeth of the Schoolboy, urging the necessity in England of a periodical examination of children's teeth, says: "While agreeing with the numerous dentists who have written concerning the decay and care of the teeth, we are of opinion that it is not alone after the eruption of the teeth that care should be exercised. The future of the teeth as well as the future of the body depends for the most part on the care of the child during the early years of its existence, and it is more important to consider the subject of children's teeth during their development in the gums and before they have erupted than even to check decay when they appear or to scoop out microorganisms from their sockets. This aspect of the hygiene of the teeth has yet to be dealt with."

A LONG SLEEP.—The *Journal de medecine de Paris* and the *Echo medical du nord*, both of date July 2d, refer to the "Sleeper of Thenelles." It appears that a young woman, Marguerite Boyenval, fell asleep abruptly as the

result of strong emotion on May 29, 1883, and has slept continuously since that date without showing consciousness even for a quarter of an hour. She is now thirty-five years of age, of which period sixteen years, or nearly half, have been spent in a cataleptic condition. She is said to be almost a skeleton, which is small wonder, seeing that she has been kept alive with difficulty by nutritive enemata only. Her pallor is described as ghastly, yet her pulse beats over eighty to the minute. She lies with her hands joined; but if the arm is raised it remains so until forcibly lowered. The entire surface of her body appears to be devoid of sensation. If the story is true this sleep is undoubtedly a record breaker.—*N. Y. Med. Journal*.

PEROXID OF HYDROGEN AS AN ANTISEPTIC.—Touchard (*Bull. Gen. de Therap.*, March 8) advocates the use of peroxid of hydrogen as an antiseptic and hemostatic, and is of opinion that this drug has not yet taken the place in surgery which it deserves. It causes rapid hemostasis on the capillary circulation, and has a temporary action on middle-sized arteries. Its action appears to be a vasoconstrictor one. The bactericidal power of peroxid was proved by submitting to its action the bacillus subtilis, the bacilli of Loeffler and Friedlaender, the bacterium termo, and other microbes, and also the fungus of trichophyton tonsurans and oidium albicans. All these organs were destroyed by the peroxid. The author concludes that it is one of the most powerful of bactericidal agents, and one which can be procured chemically pure at a moderate price. It is especially useful in all microbic affections of the mouth and throat, such as diphtheria and aphthous stomatitis, etc. It may also be used in general surgery, otology and dentistry with success.—*British Med. Jour.*

IMPORTANT DECISION IN REGARD TO THE PRACTICE OF DENTISTRY.—The Supreme Court has recently made a decision in reference to the registration of dentists in Rhode Island which closely affects the medical profession. A physician of Newport was indicted for contravening the law in that he practiced dentistry without having first obtained a certificate from the board of registration in dentistry, and without first having caused his name and place of business to be registered with the board. The defence was that at the time mentioned he was qualified to practice medicine and surgery by reason of the possession of a diploma from a reputable and legally chartered college, indorsed by the board of health, and therefore he had the right to practice medicine and surgery in all its branches upon all parts of the human body, including the teeth. Judge Tillinghast upheld this evidence, and in his opinion handed in to the Supreme Court ends with the following words: "It has always been the custom in this state, and probably everywhere else, for physicians to treat ailing teeth, to extract teeth, and to perform various other professional services which technically come within the purview of dentistry. Physicians who reside in the country towns especially have always been called upon to a greater or less extent for the performance of such services, and to now prohibit them from thus treating their patients would be a source of great inconvenience and in many cases of extreme hardship and suffering to the latter, as well as an interference with the proper and legitimate functions of the former."—*Med. Record, July, 1899*.

DENTAL BOARD OF VICTORIA, B. C., has framed regulations under the Dental Act, 1899, and forwarded them for the approval of the Governor in Council. Under these regulations, candidates for registration as dentists and for the diploma of Licentiate of Dental Surgery of Victoria must produce evidence of having passed a preliminary examination, served an apprenticeship, and pursued a course of professional study. The preliminary examination will be in English, German, French, Latin, arithmetic, algebra, geometry, history and geography, and candidates must pass in four of those subjects, including Latin. The apprenticeship must extend over a period of not less than three years, and served with a registered Victorian dentist. The course of professional study must extend over four years, the subjects of study being chemistry, anatomy, dental mechanics and metallurgy, materia medica and therapeutics, physiology and histology, general surgery and pathology, dissections, medicine, dental anatomy and oral surgery, dental surgery, pathology and bacteriology. Four examinations must also be passed before the board.—*Phar. Jour.*, July, 1899.

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